

KAYACHIKITSA SAMBHASA ABHILEKHAM COMPENDIUM OF CLINICAL WISDOM



VISHWA AYURVEDA PARISHAD

Kayachikitsa Sambhasa Abhilekham Compendium of Clinical Wisdom

Kayachikitsa Sambhasa Abhilekham Compendium of Clinical Wisdom

ADVISORY BOARD

Prof. Yogesh Chandra MishraBareilly

Prof. Kamlesh K. Dwivedi New Delhi

Prof. Govind Sahay Shukla Jodhpur

Prof. Mahesh Vyas New Delhi

Prof. Anil ShuklaBhopal

Dr. Surendra ChaudharyGreater Noida

Publisher
Vishwa Ayurveda Parishad
1/231, Vikram Khand, Gomati Nagar,
Lucknow

Sole Distributed by: SAVERA PUBLISHING HOUSE

4754, Akarshan Bhawan, 23 Ansari Road Darya Ganj, New Delhi-110 002

Phone: 011-43551008, 9837057885 E-mail: sales@saverabooks.com

Copyright © 2024, Editor

First Edition: 2024

ISBN: 978-93-81771-90-7

Disclaimer

The views and opinions expressed in this book are those of the individual authors. The editorial board and publisher assume no responsibility for the accuracy or authenticity of the content, and disclaim any liability thereof.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopying, recording or any information storage or retrieval system, without prior permission in writing from the publisher.

Printed at Sagar Colour Scan, Delhi-110002.

Type Setting: Gaurav Graphics, Delhi.

Kayachikitsa Sambhasa Abhilekham Compendium of Clinical Wisdom

Editor-in-Chief

Dr. Nitin Sharma

S.R.M. Government Ayurvedic College and Hospital, Bareilly, Uttar Pradesh.

Executive Editors

Prof. J.S. Tripathi IMS, BHU, Varanasi, Uttar Pradesh.

Prof. Mandip Goyal ITRA, Jamnagar, Gujarat.

Prof. Manjula Karlwad S.J.G. Ayurvedic Medical College, Koppal, Karnataka.

Editorial Board Members

Dr. Sujata Yadav
New Delhi.
Prof. Sudhanshu Tripathi
Siwan, Bihar.
Dr. Brahmanand Sharma

Jodhpur, Rajasthan.

Prof. Madhava Diggavi
Bellary, Karnataka.
Prof. Aruna Ojha
Raipur, Chhattisgarh.
Dr. Shweta Shukla
Haridwar, Uttarakhand.

Dr. Shraddha Joge Bellary, Karnataka.

Preface

I enjoyed to go through the present work, "Kayachikitsa Sambhasa Abhilekham, Compendium of Clinical Wisdom", an unique collection of its kind and an important contribution to academics. Vishwa Ayurveda Parishad has started a series of webinars in various subjects prescribed in curriculum of UG and PG courses of Ayurveda. In this series the team selects the subject experts from all parts of the country. VAP strongly believes that strength of any system lies in the individuals practicing it. The views and experience of the expert clinicians have been shared in this collection, which will definitely enlighten the lamp of knowledge and will be helpful for the practitioners and scholars of new generation. As an organisation VAP is committed to be a body of excellent Teachers, Researchers, Authors, Clinicians, Entrepreneurs and Social Reformers (TRACES), who will work tirelessly to take Ayurveda to zenith of its glory, individually and collectively. VAP is devoted for a healthy and happy Individual, Society, Nation and whole World and to reach its goal such types of sambhashas and other various programmes are conducted regularly.

The topics selected for discussion in these sambhasa such as Teaching Methodology for Kayachikitsa: Challenges and Solutions, Preventive measures for skin diseases, Atayika (emergency) treatment with reference to Marmaghat, Pleeha and yakrut vikar treatment in Ayurveda, Problems related to Non Alcoholic Fatty Liver Diseases, Chronic Kidney Diseases, Cardiac Disorders, Metabolic disorders, Manas vikar and Ankylosing Spondylitis (Gambhir vatarakta) etc. represent burning problems of the society, as no proper answer is available in other contemporary therapies.

I am happy to note that Shikshak Prakoshtha of VAP, especially the organizers of Kayachikitsa Sambhasa,has come up with this noble initiative of publication of Kayachikitsa Sambhasa Abhilekham, Compendium of Clinical Wisdom. May

this work inspire other groups of same nature to enrich the treasures of knowledge, with new themes and ideas and let us welcome the views from all the corners of global wisdom. This work will be helpful in understanding and solving various problems in the field of Ayurveda.

I again pay my sincere thanks to all the contributors for this nice and noble work.

Prof. Yogesh Chandra Mishra

National Organizing Secretary, Vishwa Ayurveda Parishad. Deepawali 2081 Vikrama 31 October, 2024 Bareilly, Uttar Pradesh

Foreword

In an era where the ancient wisdom of Ayurveda is increasingly relevant, this compilation of insights from the Vishwa Ayurveda Parishad serves as a vital resource for practitioners, students, and enthusiasts alike. The webinars have brought together esteemed speakers to delve into various contemporary topics within Kayachikitsa—the cornerstone of Ayurvedic medicine focused on internal medicine and holistic healing.

The challenges and solutions surrounding the teaching of Kayachikitsa underscore the need for innovative approaches in a rapidly evolving healthcare landscape. Topics such as skin disorders, the management of Pleehodara and Yakreetodara, as well as chronic conditions like non-alcoholic fatty liver disease and chronic kidney disease, highlight the extensive applicability of Ayurvedic principles in today's medical context.

Moreover, discussions on complex conditions such as cardiac disorders, Vatavyadhi, metabolic syndrome, Vatarakta, and Manas Roga showcase the comprehensive nature of Ayurveda.

As we navigate the intricacies of modern health challenges, this book stands as a testament to the collaborative efforts of dedicated practitioners and scholars committed to revitalizing and disseminating Ayurvedic knowledge. It invites readers to explore the rich tapestry of Ayurvedic principles, equipping them with tools to address contemporary health issues while fostering a deeper understanding of the interconnectedness of body, mind, and spirit.

May this work inspire a renewed commitment to the healing arts of Ayurveda, promoting well-being across communities and ensuring that the wisdom of our ancestors continues to thrive in the modern world.

I extend my sincere thanks to the contributors for their nice approach.

Prof. Vd. Kamlesh K. Dwivedi

Member
Board of Ayurveda
National Commission for Indian System of Medicine
New Delhi

Acknowledgement

First of all, I am thankful to almighty God for allowing me to study and serve the mankind through Ayurveda. I am also obliged to my parents for their blessings and inspiration. I am very much indepted to the Vishwa Ayurveda Parishad for providing me the opportunity to work as the coordinator of Kayachikitsa Sambhasa and Editor in Chief of Kayachikitsa Sambhasa Abhilekham, Compendium of Clinical Wisdom.

I whole heartedly thank Prof. Yogesh Mishra Sir, National Organizing Secretary, VAP and Prof. K.K. Dwivedi Sir, Member, Board of Ayurveda, NCISM for writing Preface and Forward for this book respectively.

I express my deep sense of Gratitude to Prof. Govind Sahay Shukla Sir, National President, Prof. Mahesh Vyas Sir, National General Secretary, Prof. Anil Shukla Sir, Rashtriya Pramukh Shikshak Prakoshtha and Dr. Surendra Chaudhary Sir, National Secretary and Technical Advisor of Vishwa Ayurveda Parishad for their continuous guidance and support.

I express my deep sense of gratitude to all esteemed and learned authors, as without their contribution it would have been impossible to bring out this book. I acknowledge the deep gratitude to members of editorial board for editing this book. I am also thankful to students Dr Shraddha Joge and Rudra Pratap Rai who provided technical support during publication process. I am also thankful to my wife, Dr. Rashi Sharma for her valuable inputs for this book.

I am thankful to Savera Publishing House for its assistance and support for the publication of this book.

"To err is Human", certain names who helped directly or indirectly in this work might have been missed unintentionally. Thanks are due to all of them.

Dr. Nitin Sharma

Contents

Edite	orial Board	v
Prefe	исе	vii
Fore	word	ix
Ackn	owledgement	xi
1.	Teaching Kayachikitsa: Challenges and their Solutions Prof. Rajendra Prasad	1
2.	Teaching Methodology of Kayachikitsa Dr. Madhava Diggavi	8
3.	Chikitsa in Atyayik Avastha with Reference to Marmaghat Vd Mithun M Bondre	12
4.	Obligatory Preventive Measures for Skin Diseases <i>Dr. Mythrey R C</i>	21
5.	Management of Pleehodara and Yakrutodara in Ayurveda Dr. Vidyasagar Panchal	26
6.	An Ayurvedic Approch to Non Alcoholic Fatty Liver Disease: A Case Series Dr. Rohini HD	36
7.	An Ayurvedic Approach to Management of Chronic Kidney Disease: A Case Series Dr. Ashwini Sajjanavar	50
8.	Understanding of Chronic Kidney Disease Through Ayurveda and its Experience/Evidence Based Management Dr. Manish V. Patel	79

9.	Understanding Cardiac Disorders: An Ayurveda Perspective <i>Prof. R.K. Yadava</i>	91
10.	Vata Vyadhi and its Management Dr. Shraddha Sharma	104
11.	Understanding of Metabolic Syndrome in Ayurveda Dr. Mamata Bhagwat	124
12.	Manas Roga – Ayurvedic Concepts and Treatment Principles Dr. Shubha. K.S	136
13.	Utility of Mutra Pareeksha In Clinical Practices Prof. Manjula Karlwad & Dr. Nitin Sharma	142
14.	Gambhir Vatarakta [Ankylosing Spondylitis] Dr. Raja Singla & Dr Shubhi Sharma	158

CHAPTER 1

Teaching Kayachikitsa: Challenges and their Solutions

Prof. Rajendra Prasad

Deptt. of Kayachikitsa, Faculty of Ayurveda, IMS, BHU, Varanasi.

INTRODUCTION

Hospital is being the face of every medical/Ayurvedic college, where multiple clinical departments contribute in patients care. Among all departments; Kayachikitsa i.e., Internal medicine plays most important role. That is why every UG, PG student as well as consultants needs to be perfect and highly trained in the field of kayachikitsa. Therefore, their teaching and training becomes big challenge keeping in mind the current scenario as well as status of Ayurvedic colleges. Sometimes students itself are responsible for the poor quality of teaching or often teachers are not perfectly trained to teach in intelligent way or not taking seriously the subject resulting into poor performances. Some of important aspects we can highlight and discuss to improvise the kayachikitsa teaching in practical way.

CHALLENGES

There are many challenges to which kayachikitsa people face to compete with modern era of medical education/science. Here we will discuss few most important factors-

Producing brilliant scholars viz....... at par modern medicine- We have to teach in such a way by which we can produce brilliant scholars so that they can fight successfully for PG courses or higher studies. Everywhere competition lies with modern medicine, so our students must be as possible as similar to modern medicine students. Then only they will be able to understand each

and every latest concepts, technology, investigation tools, latest acceptable treatment modality.

Producing successful doctors/vaidyas— Just studying, knowing, qualifying examinations, getting degree in kayachikitsa is not enough, our students should be a successful doctors or Vaidya. For which regular, perfect practical/clinical training by expert as well as experienced faculty members is mandatory. Because practical knowledge comes by experience not through books. So experienced senior faculty members should be motivated to share their clinical knowledge to benefit our students.

Produce international standard researchers- At the level of post graduate or doctoral studies, only study or patient care is not sufficient. In fact we have to conduct high quality researches that should be touching international standards, than only we can propagate and scientifically validate the kayachikitsa treasure. For each and every disease research there are international guidelines or parameters provided by international societies. When we will follow those guidelines than only our research outcomes will be globally acceptable and published it in high impact factors journals. Our teachers must be trained firstly through different resources and must be aware cum updated about all prescribed guideline before conducting or supervising the researches. Theoretical, experimental or conceptual research can be done by any basic science people or nonclinical medical department but the clinical trial be only wisely conducted by kayachikitsa people. Because without conducting clinical trial no any new drug can come in market or utilized for patient care purpose.

Transform kayachikitsa education globally acceptable – Ayurveda is being popularize globally day by day hence the kayachikitsa will also. Because without global recognition we cannot establish our science as universally accepted knowledge. To achieve this goal, we have to teach our students in such a way that they can convey our knowledge at international platforms, using globally acceptable communication skills, research methodology, worldwide acceptable diagnostic and treatment guidelines etc.

Convert kayachikitsa....rational, accessible, patient friendly, cost effective & dosh mukta — We are living in the era of specialties and super specialties that means everyone wants specific treatment modality. The prescribed drugs must be pin point and target oriented not just broad-spectrum style. For example, in mental illness specific drugs should be prescribed for different conditions. We should be very specific about patient's requirement, whether

he is needing anti-depressant, anxiolytic, tranquilizer, mood elevator or just brain tonic? Preparations containing all kinds of drugs working in mental disorders in one brand should never be promoted as it is irrational and may cause harm to the patient or the drugs possessing different *rogadhikar* may interact with each other.

Knowing and prescribing good medicines is not enough for being a good physician, in fact it is our duty to ensure that the prescribed medicines are accessible to the patients. Because unavailable medicine cannot benefit the patients. Preparations and dosage forms must be patient friendly according to their nature of job, work place, flavor choice, palatable and preferred route of administration. Cost of drugs always counts, poor patients cannot afford costly medicine. We should choose medicines according to patients' budget. And of course, the preparations must be cost effective.

Considering the concept of *Doshmukta* is very important, we should always try to prescribe those medicine which can provide relief in current problem but should not create any newer problem in the manner of side effects or unwanted effects.

Create/generate/produce/collect evidences for kayachikitsa treatment – This is the time of competition, research and advancements. Just saying that our treatment is very effective, I have treated many patients, patients are getting lot of benefits from my treatment, I have cured many patients; is not enough. In fact, society is asking evidence means we have to collect the proofs that our medicine/therapy/ system is providing relief to the patients. The evidences must be subjective and objective, very importantly based on globally accepted parameters or guidelines. Then only we can create or generate confidence among our students and the students will propagate this in society by applying the treatment modalities. We are doing the best, we know this or only we can understand or feel but to convey this to others we have to collect data and prepare relevant document.

SHORTCOMINGS AND SOLUTIONS (UG Teaching)

Of course, Government of India and NCISM is making all efforts to convert ayurveda studies more authentic, applicable, easy and practical. Still there are many shortcomings and lacunae persists that needs to be reconsidered. Some of them are as follows:

Repetition of subject contents – There are many topics which are being taught in every professional year of BAMS like fundamentals of *kayachikitsa*, *Nidan panchak*, *dosha-dushya-mala-dhatu* etc. these are just repetition of subjects and wasting the time in higher professional years. If we eliminate the unwanted contents from final prof than lots of time will be saved and utilized in dealing with disease and their management part which is most important part. It is well known that in final year, students have to dedicate enough amount of time in hospital, OPD, wards etc for their practical exposure and experience.

Ayurvedic management of current epidemics and pandemics – Every year we are facing some uncommon spreadable contagious infective disorders in the forms of epidemics or pandemics e.g. Dengue, Chikungunya, Covid, Pox, Flue etc. Similar to other diseases, government and society expect ayurvedic management in these cases too. Most of them are actually not described in our texts but these are included in the syllabus so we cannot ignore it. First, our policy makers should rethink about this that whether it is required really? If it is there than kayachikitsa teachers should frame the possible management by analyzing the involvement of *dosh-dushya-adhisthan* etc. in the etiopathogenesis of disease and correlating the features of these diseases with other established and mentioned disease in ayurvedic texts. Very importantly we should focus more on prevention of these diseases rather than cure because we have lot of options for preventive care.

Role of ayurveda services in National health programmes – This is another important issue included in syllabus. All these programs are prepared by modern medicine people and being controlled and managed by themselves. Knowing about all these programmes are more than enough, how to implement them, what are the benefits or precautions must be known to each and every doctor irrespective to their system of therapy. But every system of medicine will have role in every disease is not sure. The same situation is with ayurveda. Of course, it can be included in research studies but the syllabus content about" The role of ayurveda in these programmes" must be eliminated.

Multiple authors opinion, controversies, disputes - For a single concept or disease there are multiple opinions has been given by different authors; that not only makes the subject tough but also creates lot of confusion while diagnosing or planning the management. Treatment measures or modalities experienced and mentioned by different authors may be useful to tackle varieties of cases but disease description or anatomical and physiological discrepancies seem

to useless most of the time. There must be large discussions, debates and seminars to draw some conclusions to make common consensus about these disputes and a final concept should be propagated everywhere. In modern medicine every concept is clear undisputed specially regarding the anatomy, physiology and pathogenesis; of course etiology and treatment measures can be differ as these are the subjects of research and updating every day. Same thing we can adopt in ayurveda also, that will make our subject easier and the disease management will be easier and more approachable to everyone.

Further there are lots of shortcomings and confusion regarding subject and text books. Sometimes authentic books are not available or sometimes linguistic issue is there. Authors uses and writes as per their convenience of language. Recommended books must contain all chapters and subject matter as per NCISM prescribed syllabus.

There should be fixed time allotted for individual topics rather than it is being taught as per capability and knowledge of teachers. One teacher teaches *Swasa roga* in 3 classes whereas another finishes it in only 1 hour. It is not fair, different topics have different importance and must be taken up appropriately.

NCISM prescribes syllabus for all over India but we would find lots of diversity and variation at ayurveda institutes/colleges situated in different parts of our country. Just to make it uniform education there must be some minor amendments specially in case of kayachikitsa. For example, while mentioning management of disorders it is written like "Chikitsa sutra and management of Pranvahsrotas vyadhis". Here it should also be clearly mentioned that management with what modalities or which kind of medicines or preparations? Because in some parts of India teachers focuses the management only by herbal medicine, they don't use even not teaches their students about Guggulu preparations or Rashoshadhis etc. As a result, students become not aware of this kind of management leaving a great lacuna inside them. In India in every state, we can get differences and diversity with regards to speaking, dietary habits, living style, cultural activities, festivals, vegetation etc. the same we observe in case of treatment measures. But the ayurveda is one, syllabus is same, regulatory body is same so we should train our students in similar pattern leaving behind our local traditions or rituals. In syllabus it should be clearly mentioned that management of particular diseases by which class, category, type of drugs or preparations to be implied.

SHORTCOMINGS AND SOLUTIONS (PG Teaching)

PG study is that where one person is going to be expert or specialist of one subject/system/disease, so the focus must be over that peculiar target. Means there must be minimum time wastage and maximum time utilization to learn that specialty. In different universities and institutes the teaching and training modules differ, provided that common syllabus is prescribed by NCISM. The duration of PG courses is same in modern as well as ayurvedic medicine but here in ayurveda the students have to study both systems i.e. modern as well as ayurveda that require highly rational use of course duration.

After getting admitted in PG courses there is no any examination in First year at most of the modern medicine institutes, but in ayurveda institutes there is full-fledged theory and practical examination provision which is necessary to get promoted to PG second year. Not only examination, there is full time teaching done in subjects other than their own subject or discipline where students get admitted. Sometimes it looks to be just time wastage and leaving less time to dedicate over actual work i.e. research and thesis work. In fact it is not there in modern medicine where students have to study only one pathy. In modern medicine there is clear cut demarcation about clinical/paraclinical/nonclinical departments; where every schedule and activities vary that facilitates the students to work more conveniently. But here in ayurveda there is no any division like this, in fact here everyone wants to be clinical department. Due to which similar working and class pattern is being followed so the people from kayachikitsa, who are highly engaged in patient care either at OPD, IPD or emergency level face lot of difficulty to work perfectly.

Thesis related issues – We observe lot of discrepancies in thesis work conducted at different institutes like, some fellows do not follow actual research protocols e.g. grouping, sample size, research design, number of drugs selection, assessment criteria, research problem selection etc. While writing the thesis, many students waste their time and energy to include unnecessary contents like review of modern literature of disease. As the thesis is being prepared and will be submitted for ayurveda degree so we must focus more and more on ayurvedic views and reviews so that any valuable conclusion can be drawn. As far as modern aspect is concerned, everybody is well aware of this undisputed knowledge and we are not going to do any new intervention in that.

Examination related issues- Kayachikitsa being the purely clinical subject, focuses more on practical aspects. The questions asked in theory exams must

be according to patterns as described in syllabus as well as marks division. The examiner must be assured about the actual answer of asked individual question that if the question is allotted 20 marks than whether actual answer content is available for this quantum of marks, otherwise student will write unnecessary matter. The level and standard of questions asked specially in practical viva voce examination should vary for different courses like UG, PG and Doctoral level. Because there are some examiners who ask same question irrespective of that he is examining BAMS, MD or Ph. D. student. That lowers down the standard of examination and creates problems to students.

Not only examination pattern; special attention should be paid while appointing the external examiners. External examiners should be actually external means he or she should not be called from local cities. When a person comes from out cities, he is fully dedicated to conduct examination from morning to evening where as a person called from local city have their other engagements due which he will come either only for forenoon or afternoon. Hence he cannot contribute full hours to examine the students. In my opinion the examination should be conducted in proper way and with full justification and attention. Taking an examination can be just a duty or formality to any examiner because he has conducted so many examinations and will conduct lot of examination in his future carrier but for a student, he or she is going to appear in examination for the first and last time and it will decide his future carrier. Without contributing enough time, conducting examination in proper way we cannot do justice with students

Lastly, I recommend that our students should be motivated to attend as maximum as possible seminars/ workshops/conferences at their institutes as well as outside colleges. Every student can not study at all institutes or can be able to get trained by all teachers. The seminars provide opportunity not only to learn newer things, but through its students can get exposed to ideas of teachers of other institutes where they could not get admitted or they wished to do study in those colleges. In a seminar, experts from different institutes get participated where they not only able to train the students, they themselves also exposed to other teachers or experts that make them able to learn newer things or exchange their ideas or experiences.

CHAPTER 2

Teaching Methodology of Kayachikitsa

Dr. Madhava Diggavi

Principal, Taranath Government Ayurvedic Medical College and Hospital, Ballari, Karnataka.

INTRODUCTION

- Export quality kayachikitsa teacher, teaching kayachikitsa is a challenge.
- Kayachikitsa with shodhana, rasayana, vajeekarana, manasa roga, atyayika chikitsa, visha chikitsa.
- Kayachikitsa without shodhana, rasayana, vajeekarana, manasa roga, atyayika chikitsa, visha chikitsa.
- Kayachikitsa is strength of Ayurveda system. Capacity building regarding handling and using of instruments, invasive techniques, diagnostic equipments in kayachikitsa.

1. HOW TO TEACH KAYACHIKITSA TO UG TO PG AND PHD

As there is no separate books for U.G, P.G and PHD courses, one has to concentrate on what to teach and how much to teach as per the need. For example: Pakshaghate virechana is same for UG, PG PHD as well as panchakarma and kayachikitsa.

2. NEED BASED KAYACHIKITSA TEACHING

Practically how many hours or classes are available to teach KC in one year Current need of KC Students for Next Ten years has to be focused. Number of kayachikitsa teachers, OPD IPD duties of kayachikitsa teachers and scale of kayachikitsa teachers is same but seniority of kayachikitsa teacher will never come on the top of teaching faculty list, as kayachikitsa teachers are appointed when final year batch comes to action.

3. PHARMACOLOGICAL BASIS OF TEACHING

It is lacking and needs development for examples: Chikitsa sutra are applied during treatment which focuses on Panchakarma, Laghana, swedana etc but Pharmacological actions are not focused

4. CLINICAL CASE PRESENTATION BASED TEACHING

Once in a week student has to do bedside clinical case discussion and should explain why particular medicine is given to that particular patient, after that results should be assessed.

5. DISEASE FRAMING METHODS

Ekohetu anekarupa anekarupa ekahetu Patients may come with one disease and different lakshanas or many lakshanas for one disease. There is a lack of knowledge in such conditions while diagnosing the disease, this has to be focused in kayachikitsa teaching and treated accordingly.

6. TEACHING KAYACHIKITSA AS IT IS

For example: Ardita according to Sushruta is Bells phenomenon, According to Charaka Mukhardita and Ekanga vata is Facial weakness and according to Vagbhata it is Shirakampa (multiple sclerosis). All three chikitsa sutras and lakshanas are different and according to diagnosis chikitsa sutra should be applied.

7. TEACHING PATTERN KN UDUPA MODEL

Providing integrated training in the modern medical sciences and Ayurveda and those which only taught shudha Ayurveda.

8. HDSLA5V MODEL of teaching kayachikitsa includes

- Hetupratyaneeka
- Doshopakramaneeya
- Samprapti vighatana
- Lakshanika chikitsa
- · Aavasthika chikitsa
- Aupadravika chikitsa
- Atyayika chikitsa
- · Adravyabhuta chikitsa
- Apunarbhava chikitsa

Atyayika chikitsa

Example: In case of Jwara there is lack of knowledge about ayurvedic formulations which will reduce fever immediately such as Guduchi satva, Sudarshana churna etc rather than Paracetamol which needs to be focused.

Adravyabhuta chikitsa

There are many diseases in the classics that can be treated by nonpharmacological methods such as prameha, Unmada, Jwara etc. which needs to established.

Apunarbhava chikitsa

It includes Rasayana prayoga in different diseases which needs to concentrate during Kayachikitsa teaching.

9. Ekaladravya chikitsa Eka moolika

i.e. single drug therapy should be more stressed and results should be assessed in different clinical conditions.

10. Anubhuta chikitsa Along with ayurvedic medicines folklore medicines also to be included in the teaching.

11. Vyadhipratyaneeka chikitsa

EDUCATIONAL TOURS

One educational trip to any Kayachikitsa relevant facility once in a final professional year which will help to learn the science by living it.

PRACTICAL POSTINGS

practical postings in the KC department from first year UG course and Students must be exposed to clinical skills and application of chikitsa concepts on different diseases. Morning hospital postings to the students and afternoon discussion on cases

ROGANIDANA.VS. DRB MODEL FOR KAYACHIKITSA

The Roganidana and kayachikitsa should be reached on DRB model.

i.e. In left column Roganidana and Kayachikitsa, Right column Dravyaguna, RSBK should be correlated during teaching and applied in treating diseases.

PHARMACOLOGICAL BASIS OF KAYACHIKITSA

Pharmacological basis of kayachikitsa should be taught in protocol.

INTERCOLLEGIATE DEBATES & DISCUSSIONS

Between like minded Kayachikitsa intercollegiate departments ,debate and discussions can be done once in a month and it will add on in knowledge .

CASE PRESENTATION Weekly by U.G

one case presentation by one student.

SEMINARS

Exam oriented kayachikitsa discussion seminar can be organised once in a month.

MULTIPLE CHOICE QUESTIONS

Multiple choice questions in kayachikitsa final examinations should be asked to develop to the point knowledge.

CONCLUSION

In a nutshell, kayachikitsa under graduates and post graduates teaching requires reforms. The need of the country today in ayurveda sector in general and kaya chikitsa in particular is to prepare skilful expert medical practitioners. The only solution is competency based kayachikitsa curriculum which is focused more on practical teaching and training.

New teaching methodology like activities, discussion, seminars, webinars, symposiums, group discussion, peer review, demonstration, bed side clinical discussion, case presentation, flipped classes, rooms, problem-based discussion, student centric activities can be adopted.

Applied kayachikitsa should be explored by adopting the teaching and training methods where there will be less theory classes and double practical classes and live clinical classes. Both online and offline market need based, competent structured methods should be adopted.

Pharmacological bases of kayachikitsa should be taught at ug level. Use of panchagavya products should be clarified and brought into practice. To conclude kayachikitsa teaching and training should be student centric and economically sustainable. Confident, expert quality Ayurveda vaidya can be manufactured by teaching applied kaya chikitsa.

CHAPTER 3

Chikitsa in Atyayik Avastha with Reference to Marmaghat

Vd Mithun M Bondre

Professor, Department of P.G. Studies in Kayachikitsa, Gomantak Ayurveda College, Shiroda Goa

Atyaya is Synonymous to Mrutyu

Ref: amarkosha 2/8/116

DIFFERENT MEANINGS OF THE WORD ATYAYA:-

• Dictionary:

- passing, lapse, passage, passing away, perishing, death, danger, risk, evil, suffering.

• Ayurveda Shabda Kosha :

- Vyapata
- vinasha
- roga
- upadrava
- nasha

DIFFERENT MEANINGS OF THE WORD ATYAYIKA:-

- **Dictionary**:- having a rapid course, not suffering delay, urgent, requiring immediate help.
- Ayurveda shabda kosha :- one which can lead to Vinasha.
- Gangadhar Tika: If left untreated can lead to death like bushfire accounting for death of the forest. So needs urgent attention & efforts. Ref. Charak Nidan 2/7

PRADHANA HETU

- ❖ MARMABHIGHATA- Ref: Charak Siddi, 1/38
 - Marmas are mentioned as confluence of mamsa, sira, snayu, sandhi & asthi.
 - Pranasthana by nature.
 - So, when marmaghata occurs due to bahya or abhyantara hetu; Pranabhaya will always be there. Also there will be vitiation of mamsa, sira, snayu, sandhi & asthi.

The types of Marmas are also self-explanatory in explaining their relation with Prana.

- Atleast 3 of them viz
 - > Sadyapranahara
 - Kalantarapranhara
 - > Vishalyaghna.

Panchabhautik Constitution of Marma decides the influence of it on prana.

- o Sadyapranahara- agnibhuyishtha
- o Kalantarapranhara- saumyagneya
- o Vishalyaghna- vayavyani
- o Vaikalyakara- soumyani
- o Rujakara- agni vayugunabhuyishtha.

SAMPRAPTI OF MARMAGHATA:

- Kshata at marmasthana
- · Raktatipravruttih from kshata as chaturvidha sira are present at marma
- Raktasankshaya
- · Mamsadidhatu apachaya
- Vrudha & chala vayu
- Tivra ruja, pitta udirana, trushna,shosha,mada,bhrama
- Svinna, srasta, shlatha, tanu
- Antaka- mrutyu

- Partial loss of this Ashtabindu Oja also leads to death, according to Chakrapani.
- Ojanasha leads to death.
- Prakruta oja maintains lifecycle.
- Said to be uttama pranayatana

LAKSHANA:

MARMAGHATA SAMANYA LAKSHANA-

- Bhrama
- Pralapa
- patana
- Pramoha
- Vichestana
- Sanlayana
- Ushnata
- Srastangata
- Murcchana
- Urdhwavata
- Vatakruta tivra ruja
- · Mamsodakabha rudhirsrava
- Sarva-indriyartha- uparama

VISHISHTA LAKSHANA ACCORDING TO TYPES:

❖ SADYAHPRANAHARA:

- Loss of perception of objects by sense organs.
- · Abnormal behaviour of mana, buddhi
- Vividha & tivra ruja

❖ KALANTARA PRANHARA:

- Dhatukshaya
- Vedana

❖ VAIKALYAKARA:

- Kriyahani
- · Kriya yuktatva- due to Nipuna vaidya
- Vaikalya- still persists.

❖ VISHALYAGHNA:

- · Sashalyo jeevati
- Udhrutashalyo mriyate

❖ RUJAKARA:

- · Vividha ruja
- Vaikalya

TRIMARMA-ABHIHATA LAKSHANA:

***** HRIDAYA-

- Kasa
- Shwasa
- Balakshaya
- Kanthashosha
- Klomakarshana
- Jivhanirgama
- mukhashosha
- Talushosha
- Apasmara
- Unmada
- Pralapa
- Chittanashadi

SHIRAH:-

- Manyastambha
- Ardita
- · Chakshurvibhrama
- Moha

- Udveshtana
- Cheshtanasha
- Kasa
- Shwasa
- Hanugraha
- Muka
- Gadgadatva
- Akshinimilana
- Gandaspandana
- Jrumbhana
- Lalasrava
- Svarahani
- Vadanajimhatva

***** BASTI:-

- Vata-nigraha
- Mutra-nigraha
- Varcha- nigraha
- Vankshana shula
- Mehana shula
- Basti shula
- Kundala
- Udavarta
- Gulma
- Vatashthila
- Upastambha
- · Nabhi graha
- Kukshi graha
- Gudagraha
- Shroni graha

***** Reference from Samhita:

Atyayika (Ch.Su. 12/10)

Mahaatyayika (Ch.Chi. 21/41)

❖ Marmopaghata as a causative factor in various Diseases:

- ➤ Shotha Ch.Chi. 12/6
- ➤ Hikkashwas Ch.Chi. 17/11,12
- ➤ Vatavyadhi Ch.Chi. 28/15-19
- ➤ Klaibya hetu Su.Chi. 26/12
- ➤ Vamanvirechan vyapat- vata/marma shula Su.Chi. 34/9
- ➤ Marmabhighataj daha Su.Ut. 47/78
- ➤ Vidradhi marmothitana Su.Ni. 9/23
- ➤ Mahahidma lakshan marmaghattan A.S.Ni. 4/31
- ➤ Chinnashwas lakshan marmacheda Ch.Chi. 17/52
- ➤ Chardi samprapti marmaprapeedayan Ch.Chi. 20/7
- ➤ Marmabhighata asaadhya Su.Sha. 6/42
- ➤ Vishesha shalya lakshan Su.Su. 26/10
- Shukragata jwara lakshan A.S.Ni. 2/94
- Urdhwashwas lakshan marmasu A.S.Ni. 4/20
- ➤ Basti vyapat marmapeedanam A.S.Ka. 6/13,14
- ➤ Siramarmavidha lakshan A.H.Sh. 4/50

CHIKITSA

TIME AVAILABLE FOR TREATMENT-

- Sadyapranahara- seven days
- Kalantarapranahara- fifteen days or one month
- Kshipra, etc- ashu marana

So the sadyah in all conditions under atyayik can be considered to be of 7 days to one month depending upon factors like marmaghata, ojakshaya, rakta kshaya, etc.

MARMABHIGHATA CHIKITSA SIDDHANTA

Ref: A.S.Sh. 7/22,24,25; Ch. Si. 1/38,39

MARMA PARIPALANA CHIKITSA

A BASTI-

- · Marma has to be protected from vata
- Vata provokes pitta & kapha
- Vata is also pranamula
- · Basti is best treatment for vata
- · So basti should be given for marma- paripalana.

❖ Types of basti-

- Yapana
- Brunhana
- Madhura, jeevaniya, dravya siddha sneha, ksheera, ghrita, ghritamanda etc.

CHIKITSA SUTRA FOR TRIMARMA

- Abadhavarjana
- Nitya swasthavruttanuvartana
- Utpanna-Arti-Vighata

CHIKITSA FOR SHONITATIVRUTTI:-

- Kakolyadi kwath- with sharkara, madhur dravya prakshepa.
- Raktapana of- ena, harina, urabhra, shasha, mahisha, varaha,
- · Ksheera, yusha, mamsarasa-odana
- Disease specific treatment for upadrava.
- · Ahara- natisheetta, laghu, shonitavardhana, eshad amla/ anamla
- Brunhana- according to Ashtang Sangraha

Ref: Ch.Su. 22/30

INDICATIONS OF VASAPAAN:

Ref: Ch.Su.13/48,49

INDICATIONS OF SARPIPAAN:

Ref: Ch.Su. 13/41-43

INDICATIONS OF LEPA:

Ref: Su.Su. 18/9

INDICATIONS OF DARANA KARMA:

Ref: Su.Chi. 1/35-37

SADYOVRANA CHIKITSA:

Ref: Su.Chi.2/77,78

MARMASHRITA VYADHI KALPA ACCORDING TO VAGBHAT:

Bala Taila – Ref: A.S.Sh. 2/46-52

Jatyaadi Taila - Ref: A.S.Ut. 25/67

CLASSICAL COMBINATIONS FROM SUSHRUT SAMHITA:

- Amalki churna + madhu + suvarna
- Shatavari ghruta + suvarna- madhu
- Priyangu, putranjeevi, yashtimadhu, madhu & suvarna
- Padma-neelotpala kwatha+ yashtimadhu+sarpi+ suvarnawith payanupana (siddha)

SUVARNA KALPA & RASA KALPAS USED IN TODAY'S PRACTICE:

- Hemagarbhapottali rasa
- Trailokyachintamani rasa
- Brihatvatachintamani rasa
- · Vasantkusumakara rasa
- · Yogendra rasa
- Suvarna bhasma
- · Laxmi vilas guti
- Maha laxmivilasa rasa

- Sahasraputi abhraka bhasma
- Mouktik bhasma
- Mouktikyukta kamdugha
- Mouktikyukta pravalpanchamruta
- Suvarna malini vasant
- Siddha makardhwaja
- Suvarna sameerpannaga
- Shwasakasa chintamani
- Mrugshrunga bhasma
- Rasasindura
- Mallasindura
- Mahayata vidhwansana rasa
- Vatakulantak rasa
- Jaymangal rasa

CHAPTER 4

Obligatory Preventive Measures for Skin Diseases

Dr. Mythrey R C

Professor and Head Dept.of PG & PhD Studies of Kayachikitsa, Government Ayurveda Medical College, Mysuru.

Skin is one of the important organ of the body. Being a protective layer it acts as a mirror, as it reflects our inner health. Skin disorders are of Multidimensional. It can be genetic /auto immune/ simple infectious/allergic or of cosmetic problems. Any skin condition impacts heavily on individual's daily activities and on the psychological (emotional) state. It affects the social relationships and to get rid of it the sufferer will confront the financial burden. The common skin diseases prevailing globally are- Pruritus, Eczema, Psoriasis, Impetigo, Scabies, Molluscum contagiosum, Fungal infection, Acne vulgaris, Pigmentation problems, allergic reactions.

The regular reasons, from which a person develops skin disease are

Aharaja Nidana (The causes related with intake of food)

- Indulging in improper dietary habits i.e., consuming food in improper time, improper quantity and without following Ashtavidha ahara visheshayatana (the eight rules and regulation related with food). The consumption of food which are heavy in nature and heavy to digest, foods which are incompatible in nature, food which are not accustomed to one's body, consuming food before digestion of previously consumed food. Excessive consumption of salty, Alkaline, Sour, Pungent food.
- Regular consumption of the meat of wild, aquatic animals (specially Chilichima - Variety of Fish) with milk, animals residing in marshy areas, and of prasaha variety(animals which extend their neck to consume food)

- Continuous and excessive consumption of madhu (honey), phanita (molasses of sugarcane, mulaka (Raddish), kakamachi (solanum nigrum, garden nightshade).
- Excessive consumption of milk, curd, buttermilk, Kulatha(horse gram), Masha(black gram), Nishpava(cow pea), atasi (flaxseeds),kusumba sneha(sunflower oil), tila taila (sesame seed oil), pindalu(a starchy vegetable named taro).

Food allergy can be caused by Spices, condiments, tea, coffee or alcoholic distillates taken in excess - predisposes to allergic conditions and dermatoses. Fruits particularly strawberries are allergenic. Sometimes Bananas and pineapples can be allergic. Additional food allergens are include Wheat, Legumes, Soybeans, chocolate, carbonated beverages, beer, egg protein, flavors, yeast etc.

Viharaja nidana (The causes related with the lifestyle)

- Improper snehadi shodhana chikitsa.
- Day sleep followed by consumption of food.
- Controlling the urge of vomiting may lead to diseases like visarpa, kotha, kushta, akshikandu, pandu, vyanga, shotha
- Indulging in sinful acts like disrespecting elders, parents, teachers etc

Other common causes of skin disorders include: A weakened immune system, contact with allergens, irritants, or another person's infected skin, genetic factors, bacteria trapped in skin pores and hair follicles, fungus, parasites, or microorganisms living on the skin, viruses, Numerous health conditions and lifestyle factors can also lead to the development of certain skin disorders.

Stress, Lack of sleep, Climatic changes, Environmental pollution, Vitamin deficiency can also be the reason to develop skin diseases. Stress causes hormonal imbalances, which may cause or trigger any skin disorders. Stress, causes Inflammation and Skin Aging. There will be Long term skin damage or severe effects of comorbidities due to chronic stress.

By all the above reasons, the three doshas aggravates simultaneously and invades four tissue elements like twak,rasa,rakta and mamsa and makes them weakend or loses the strength in their normal functioning. This state brings the disturbance in the skin and related dhatu causing Kushta or skin disease.

Long term indulgence of reasons and stress causes the actions of dosha and dhatu get deeply vitiated. This can cause chronic catecholamine stimulation

leading to DNA damage. This alters transcriptional regulation which makes a way for compromised genome integrity. This transformation takes years to develop, they will become deep seated, in turn will become difficult to cure. The skin will become a target organ, and once the skin gets damaged, it will be a very hard task for a person to get rid of the symptom experienced in different skin diseases.

Hence, by knowing the above information, it becomes utter important to take care of the skin. Hence it is better to adopt the advices given in Ayurveda literatures which tells the remedies not to develop skin disease. It becomes an obligation to compulsorily follow the preventive measures to avoid the development of skin

diseases. An old saying will become appropriate for this concept, i,e; "Prevention is better than cure", "an ounce of prevention is worth a pound of cure"

So how to keep our skin healthy?

There are four general concepts to follow to have a healthy skin:

- 1. Being away from the causative factors (Nidaana parivarjana)
- 2. Prevention based on Daily regimen (Dinacharya)
- 3. Seasonal regimen (Rutucharya)
- 4. Moral code of conduct (Sadvrutta)

Along with this We have to follow certain rules by taking responsibility for our own skin care. Teach children to take responsibility for their own skin care. Prevent yourself from getting mechanically injured. Keep skin clean and dry. Eat a healthy diet. Avoid prolonged pressure on any one spot. Develop a good home rehabilitation program like panchakarma shodhana, upakarma procedures.

Preventive measures by,

Food To consume

Food and drinks made of shali (Rice), yava (barley), godhuma (wheat), koradusha, and priyangu, lentils, tubers, bitter vegetables, vegetables grown in jangala desha, khadira, nimba, arushkara are good. Use of either the essence of greengram or soup, mixed with the neem leaves and other herbs, and the ghee prepared by adding the flowers of Mandookaparni, avalguja, vasa should be consumed.

Practices to adopt

- 1. Vajraka taila abhyanga should be done
- 2. Use of aragvadha kashaya for uthsadhana purpose.
- 3. Khadira kashaya should be used for bathing, drinking, and eating.
- 4. Observing vows, serving the sacred, practicing renunciation, worshiping the guru, and showing friendship towards all beings. Through the worship of Lord Shiva, God Ganesha and the sun (Bhaskara), one eliminates the impurities of sin and uproots Kushta(skin diseases).

One who is constantly engaged in healthy food, recreation, and is discerning, unattached to sensory pleasures, is generous, equitable, truthful, forgiving, and a seeker of the ultimate truth — such a person becomes free from disease.

In the morning, one should consume a decoction of Amritavalli (Tinospora cordifolia) or its essence; if its ghee is prepared, it should be taken in the afternoon for lunch. one should enjoy food prepared with ghee made of Amalaki (Indian gooseberry) juice. By using this regimen for a month, one will be free from all forms of kushta. The use of Mustadi powder daily is a practical remedy for eliminating Kushta.

The purification of doshas at the right time is very important, if doshas are exceedingly accumulated, it poses danger for health.

The doshas sometimes become disturbed, even if they are subdued by langhana(fasting) and pachana (digestion) like shaman chikitsa but those who are purified by proper shodhana karma do not manifest again. Doshas accumulated during shitakala should be purified in vasanta ritu. Doshas accumulated during grishma ritu should be purified in varsha ritu. Doshas accumulated during varsha ritu should be purified in sharad ritu.

Abandonment of Prajnaparadha: Wrong decisions or ignorant actions should be abandoned. Subduing the senses; The senses must be restrained and controlled. Memory power must be kept strong and stable. There should be knowledge of time, place and soul (self). Following the Sadvritta: One should follow good character and ideal lifestyle.

One should avoid consumption of Amla (sour substances), Lavana (salt), Meat, fat, milk, curd, oil, kulattha (horse gram), maasha (black gram), ikshu (products of sugarcane), pishta (flour preparations), and their preparations (processed forms), incompatible food, consuming food before the digestion of previously

consumed foods. These things accumulate doshas in the body, slow down agni (digestive power) and cause indigestion, vidahaa (acidity or burning), and accumulation of toxins in the body. In addition, sleeping during the day, overeating, and excessive sexual intercourse also contribute to these problems.

Medicines should be used in sequence and according to the combination. Rasayana and vajikarana dravyas should be used in combination according to the time appropriately in order.

When a person follows the appropriate diet and lifestyle, he attains all kinds of happiness and tranquility and he gets all kinds of purity (paavakapatvam), wisdom (dhi), truthfulness of the senses (indriyavaimalayam), fertility (vrishataam), and longevity (dirghyamayusha).

Very few people are blessed with naturally perfect skin and beauty. But many people may not be so lucky. So, maintaining healthy lifestyle is always important to have a healthy skin. So it is always a good idea to follow the preventive measures to get rid of skin diseases or rather not to develop any skin diseases.

____***__

CHAPTER 5

Management of Pleehodara and Yakrutodara in Ayurveda

Dr. Vidyasagar Panchal

Founder :Sanatana Ayurveda, Assistant professor, Department of Kayachikitsa, Rajrajeshwari Ayurvedic Medical College, Humnabad, Bidar, Karnataka.

Today the world is looking towards Ayurveda with hope when it comes to the treatment choices in hepato biliary system disorders. There are no promising results found in other contemporary systems in comparison with ayurvedic system. Ayurvedic literatures are way ahead in understanding the complex pathogenesis involved in the liver and spleen disorders and treatment of them.

Pleehodara is a type among 8 types of Udara explained by acharya Charaka. Acharya Charaka quoted it as one among the Santarpanotta vyadhi.

Prameha moodhavatashcha kushtanyarshamsi kamala | Pleeha pandvamayah shopho mutrakruchram arochaka ||

Uktam santarpanothaanam apatarpanam aushadham || ch.su 23/24 The liver and spleen disorders are also discussed under the Raktapradoshaja vikaras.

Vakshante raktadoshajaah

Kushta visarpa pidaka raktapittam asrudgdhara

Guda medra asyapaakashcha pleeha gulma atha vidhradhi.... Ch chi 28/21

The diseases such as Kushta, Visarpa, pidaka, Raktapitta, Raktapradara, Guda paka, medhrapaka, Asya paaka, pleeha, Gulma, Vidhradhi, Nilaka, Kamala, Vyanga, Piplava, Tilakalaka, Dadhru, charmadala, Shwitra, Pama, Kotha, Mandala, are Raktapradoshaja vikaras.

A brief explaination of Ekadeshiya shotha is been given in Charaka sutra 18th chapter. i.e Trishotheeya adhyaaya.

Yasya vatah prakupitah twak mamsantaramashritam

Shotam sanjanayet kukshau udaram tasya jayate ||ch.su 18/31

Vitiated Vata takes shelter in between the Twacha and mamsa of Udara pradesha, and cause Udara

Udaram cha kukshim anhya.... | Ah Ni 12

Dosha sanchaya in koshta causing udara utseda...

Hetu of Pleeha and Yakrit vikaras:

Agnidoshan manushyanam rogasanga pruthagvidha

Malasangat prajayante visheshena udarani tu | ch chi 13/9

Agni plays a major role in the manifesting of disease, where there is accumulation of a large amount of mala in the udara.

Roga sarve api mandagnou A.H Ni 12/1

Agni which is said to be the Prana of the living beings when got vitiated, and the person still continues the malinabhojana, the outcome will be the Dreadful disease called Udara

Critical analysis of nidanas

Pleehodara, keertayato nibodha me....

Vidahi abhishyandiratasya janto...... Su.Ni 7/16

If we analyse the above said nidanas of pleeha and Yakrutodara, we can classify these hetus into two sets.

- 1. Vidahi and
- 2. Abhishyandhi hetus.

Vidahi:

The food substances which cause internal burning sensation like madhya, kulatta, spices etc...

Abhishyandhi:

The food which causes obstruction to the srotas by secretion & which causes Kaphaprakopa like dadhi, mosha etc is said to be Abhishyandhi.

Types of Udara

Nija

- 1. Vataja
- 2. Pittaja
- 3. Kaphaja
- 4. Sannipataja
- 5. Pleehodara
- 6 Jalodara

Agantuja

- 1. Badhagudodara
- 2. Kshata/ chidrodara

TYPES OF PLEEHA VRUDDHI AS PER BHAVA PRAKASHA

1. Vataja pleeha vrudhi:

Nityamaanadha koshta syat nityodavarta pidita vedanaabhi paritascha pleeha vatika chyate ||

These lakshana can be seen in todays cirrhosis of liver

2. Pittaja pleeha vrudhi

Sajvara sapipasancha sadaho moha samyutah peetagatri visheshena pleeha paittika chyate $\mid\mid$

These lakshanas indicates inflammatory hit condition of liver and spleen. Such as stetohepatitis.

3. Kaphaja Pleeha vruddhi

Pleeha mandavyatha sthoota kathino gouravanvita |

Arochakenasamyukta pleeha kaphaja uchyate

- Mild pain (Manda vyatha)
- > Spleeno megaly (Adhika sthoola)
- ➤ Hard on palpation (kathina)
- > Heaviness of abdomen.
- Tastelessness (Arochaka)

4. Raktaja pleeha vrudhi:

Klamo bhrama vidahascha vaivarnyam gouravam moho raktodaratwam cha jneyam raktaja lakshanam ||

These symptoms indicate the much complicated conditions such as portal hypertension, ascites, encephalopathy etc.

Understanding the Samprapti of Pleeha - Yakrut vikara

Rudhwa swedambu vahini doshah srotamsi sanchitah.... ch.ch 13

Continues hetu sevana lead to dushti in sweda and ambu vaha srotas, causing obstructive pathologies. Here ambu refers to Rasa, Rakta, Mutra, sweda etc. drava pradhana entities which will represent the samana vata kshetra.

These intern vitiate prana, agni and samana vata kshetras. Which leads to manifestation of udara.

Similar samprapti we get to see in Shwasa samprapti

Yada srotamsi samrudhya marutah kapha poorvaka |

Vishwag vrajati samrudhya tada shwasan karoti sah || chichi 17/45

(chakrapani- vishwag vrajati iti sarvato gachati)

Understanding of Pleeha vruddhi and Pleehodara

Pleehodara and pleeha vruddhi terms are mostly used as synonyms of each other but they are two different conditions. To understand this we need to study both of these conditions separately.

Pleehavrudhi

We get the word pleehavruddhi in explaination of Medokshaya lakshanas.

Medakshaye...., su.su 15/9

Samprapti :

In this condition the size of the pleeha will increase from the normal, and some systemic symptoms are also observed. In this condition there may not be Udara utseda (distension of the abdomen).

2 Pleehodara

Atyashana, sankshobha, Yana, ati vyayama, adhwa gamana etc...



Rasa & Rakta vruddhi



Pleeha chyuti / vruddhi



Pleeha becomes Ashteelavat kathina.



Kachapasamsthana vat

Sa Upekshitam



kramena, Vardhamanam —



Vamaparshwa vrudhi



Pleehodara

Dakshina Parshwa Vruddhi



Difference between Pleehavrudhi & Pleehodra

- Acc to Bhavamishra, the nidana which cause plehavruddhi are the one which are responsible for pleehodara also.
- Pleeha increased in size and has crossed the costal margin and went beyond Umbilicus, but there is no Udara utseda because of that, then it is to be called as Pleehavrudhi. Not plechodara.

If there is Udara utseda because of Pleehavrudhi even in small amount, it is termed as Plechodara

Udara samanya lakshana

Ch.chi 7/24

These lakshanas are dosha nirapeksha lakshanas Found in all udara rogas.

Kapha = Sthirata kshaya, Pichila guna vrudhi, Guru guna vrudhi

Pitta = ushna-teekshna guna vrudhi

Vata = "Karma kshaya" and Rooksha guna vrudhi.

Critical Analysis of these symptoms

Lakshana	Dosha involvement
Gamane ashakti, dourbalya,	
Shotha, udaka vrudhi	Vata vrudhi, prana dushti
Kapha- dravya vrudhi	
Vatapurisha sanga	Apana dushti
Paka	pitha-ushna guna vrudhi
Daha	pitha-ushna guna vrudhi
Shushkavaktrata	Ambuvaha srotodushti- kshaya
Karshya	Rasavaha sroto dushti, Vata- Rooksha guna vrudhi

JALODARA

Jalodara is the destiny of all kinds of udara if not treated. Jalodara is also said to be the condition indicating asadhyata of the disease.

Clinical features of Jalodara

The following are the signs and symptoms of Udakodara:

- Loss of appetite, Morbid thirst,
- Discharge from the anus,
- Colic pain, Dyspnoea,
- Cough and general debility
- Appearance of net-work of veins having different colours ove abdomen and
- In percussion and Palpation, The physician feel as if the abdomen is
- A leather bag filled with water.

Acharya Sushruta while explaining Antar vidhrudhi, explained different symptoms arising due vidhrudhi in different parts of the body. These symptoms exactly match with the todays modern condition such as splenic abscess.

Spleenic Abscess:

One of the symptom found in this condition is; Left-sided chest findings such as dullness, rales, or a rub at the base may be present. Pleuritic chest pain around the left lung is aggravated by coughing or forced expiration.

The sushrutas explaination contains most of these symptoms.

Sadhyasadhyata of Udara

Vataja, pittaja, kaphaja, pleehodara, sannipataja udara are said to be difficult to cure subsequently.

Baddha gudodara becomes asadhya after 1 paksha. Chidrodara is surgically treatable. All the jalodaras become difficult to treat once the water accumulation starts.

Treatment

In management of Yakrit and pleeha roga all kinds of shodhana and shamana chikitsa have been incorporated.

Aomng the snehana, swedana, niruha, anuvasana, raktamokshana etc. can be judiciously selected.

A Virechana

Virechana has got very important role in these diseases. Dosha sanchaya is excess in udara roga. This needs to be removed out regularly from udara by virechana.

Drugs used for virechana which are ushna,tikshna, sukshma ,vyavayi and vikasi. Because of their Agneya nature - they liquefy the compact doshas ,

Tikshna guna - they separate the adhered doshas located in the gross and subtle channels of the entire body.

Because of its nature to move through subtle channels and to flow towards the gastro – intestinal tract, this morbid material reaches the stomach, and gets propelled by udana vayu.

Because of the predominance of Prithvi and Jala mahabhutas to move downwards, the morbid material get expel through Adho marga.

Nitya Virechana:

Nitya virechana is indicated in śothā avasthā (edematous condition) where kaphadośa predominance (retention of fluidity) is observed.

It is helpful to reduce kledāmshatā (fluid retention) in the Dhātu , thus reducing excess fluid retention extra- and intracellularly, which in turn facilitates proper microcirculation and reduces the duration of the edematous stage.

In addition, Dhātugata Agni-digestive and assimilation capacity and enzymatic functions through the liver system will be improved by the Nitya virecana.

By the laxative actions it creates osmotic effects in the gut to suck the extra fluid retained anywhere in the body.

Hyper osmotic action draws fluid in to the intestine to increase motility and stimulates release of Cholecystokinin that causes fluid and electrolytes to accumulate and passes out.

B Raktamokshana

Raktamokshana is advised in left hand for Pleehodara and in right hand for Yakrutodara.

- C. Basti
- D. Agnikarma.
- 2. Shamana Chikitsa
- 1. Shatpala ghrita
- 2. Ksheera Shatpala ghritam:
- 3. Pippali vardhman rasayan

SINGLE DRUGS

- 1. Sharapunkha
- 2. Rohitaka
- 3. Vidanga Kshara

Other Important Yogas

- · Narayana churna
- Arogyavardhini vati
- Patolkatukarohinyadi Kashaya
- Nimbatwagadi Kashaya
- Vasaguduchyadi Kashaya

TREATMENT IN STAGE OF INFLAMMATION

Pitta lakshanas are more-dhatu paka is more - Virechana

- · Pittahara, Kamalahara, Anulomana, Saaraka
- Vasaguduchyadi Kashaya
- Patoladi Kashaya
- Patolakaturohunyadi Kashaya
- Bhunimbudi Kashaya
- Virechana Avipatti Trivrut leha Etc..
- Fresh Swarasa of Guduchi + Nimba+ Punarnava Bhumiamalaki,
- Ekamoolika prayoga;
 - i) Vasa
 - ii) Guduchi
 - iii) Nimba
 - iv) Katuki
 - v) Shatavari
 - vi) Bhunimba

Dhatu paka continues; Cirrhotic condition...

"Nidranasha hrudisthambha vishtabdha gourava aruchil Aratir bala hanishcha dhatunam paaka lakshanam||

Agni sthana - raktavaha sroto moola- is totally replaced by scar tissue..

Liver cirrhosis Almost all pathologies end with vata dominant condition.. Dhatupaka...

(Dhatu mala sanchaya is initial stage kapha - rukshana Dhatu paka-pitta-ghrita Dhatu kshaya-vata)

Guduchyadi ghrita, Punarnava, Shilajatu etc.

TREATMENT OF FATTY LIVER

- Kaphahara, Lekhana, Ushna, teekshna, Varmana, Langhana
- Avyayama diwaswapna medyanam cha ati bhakshanat Medovaltini dushyanti varunya cha ati sevanat!

How to make decision here? Accumulation of fat & triglycerides in hepatocytes,

- Sthanika dosha is Pitta- Agantu dosha is kapha
- Patoladi Kashaya+ Varunadi kashya
- Nimba twagadi kashaya,
- Triphala guggulu, Kanchanara guggulu
- Periodic virechana is important. Haritaki, Avipatti clurna Kumaryasava and Rohitakasava like drugs

Medicines like,

- Triphala.
- Katuki,
- Shunti,
- Haridra
- Vacha,
- Triphala Guggulu
- Arogyavardhini vati etc.

CHAPTER 6

An Ayurvedic Approch to Non Alcoholic Fatty Liver Disease: A Case Series

Dr. Rohini HD

Professor, Adichunchagiri Ayurvedic Medical College Hospital and Research Centre, Nagrur, Nelamangala, Bangalore.

ACRONYMS

NAFLD- Non-Alcoholic fatty liver Disease.

NAFL- Non-Alcoholic fatty liver.

NASH- Non-Alcoholic Steato Hepatitis.

HCC- Hepato Cellular Carcinoma.

MAFLD-Metabolic dysfunction associated fatty liver disease.

INTRODUCTION

Non-alcoholic fatty liver disease (NAFLD) is a broad term that encompasses a spectrum of liver conditions. It ranges from simple steatosis, which is the accumulation of fat in liver cells (NAFL), to a more severe form known as non-alcoholic steatohepatitis (NASH). In NASH, fat buildup in liver cells is accompanied by inflammation, which can potentially progress to liver fibrosis, cirrhosis, and even hepatocellular carcinoma (HCC).

Non-alcoholic fatty liver disease is the build up of fat in the liver in the absence of recent or ongoing significant alcohol consumption. A Non-alcoholic patient is defined as either total abstainer or with alcohol intake of less than 20g/day (approximately 30ml of whisky, 100ml of wine, 240ml of beer is equal to 10g of alcohol). Non-alcoholic steatohepatitis is best defined on histology with the presence of one of the three features namely ballooning of hepatocyte,

Mallory hyaline and fibrosis in addition to the existence of fat with or without the lobular inflammation.

NASH is the most common cause of chronic liver disease worldwide and it is emerging as one of the cause of primary HCC as well as it is the second leading cause for liver transplantation.

Prevalence Studies indicate that around one in three adults and children in India are affected by non-alcoholic fatty liver disease (NAFLD)

NAFLD is defined as the presence of >5% hepatic steatosis without evidence of hepatocellular injury in the form of hepatocyte ballooning. NASH is defined as the presence of 5% Hepatic Steatosis and inflammation with hepatocyte injury (eg ballooning), with or without and fibrosis.

Nonalcoholic steato hepatitis is best defined on histology with the presence of one of three features namely balloning of hepatocyte, Mallory hyaline and fibrosis in addition to the existence of fat with or without the lobular inflammation.

NAFLD is strongly associated with type 2 diabetes mellitus, obesity, hypothyroidism, PCOD, dyslipdemia and metabolic syndrome.

Even in non-obese patients with central obesity will also have the great risk of development of NAFLD.

In general population the prevalence of the disease is 9- 25% according to few studies. There is no gender or age specification for prevalence both are equally competent and even this disease is prevalent more in children because of increased incidences of child obesity.

Natural History of NAFLD:

Up to 90% of patients with NAFLD have simple steatosis which carries a relatively benign prognosis, with no overall increase in mortality. However approximately 10-30% have the potentially progressive form of NAFLD, non alcoholic steatohepatitis which is associated with hepatocellular injury and inflammation approximately 25-40% of patients with NASH will develop progressive liver fibrosis ultimately resulting in cirrhosis in 20-30%. The development of cirrhosis due to NASH is associated with a poor long term prognosis.

CLINICAL FEATURES

- **Asymptomatic Presentation**: In many cases, individuals with early-stage liver conditions like fatty liver disease (especially NAFLD) may not show any specific symptoms. The condition is often discovered incidentally during investigations for other health problems.
- **Mild Symptoms**: Some individuals may experience mild symptoms, such as discomfort or mild pain in the right upper quadrant of the abdomen, which is where the liver is located.
- Progression to Cirrhosis: In more advanced stages, if the liver damage
 progresses to cirrhosis, more significant symptoms may arise, including
 jaundice (yellowing of the skin and eyes), indicating compromised liver
 function.

INVESTIGATIONS

The diagnostic tools and tests commonly used for evaluating liver health, especially in conditions like fatty liver disease or cirrhosis. Here's a brief description of each:

1. Ultrasonography of Abdomen and Pelvis:

o This is a non-invasive imaging technique that uses sound waves to create images of the liver and surrounding organs. It's often the first test done to detect liver abnormalities like fatty infiltration, tumors, or changes in liver size.

2. Elastography or FibroScan:

o This is a specialized ultrasound technique used to measure the stiffness of the liver tissue. Increased liver stiffness can indicate fibrosis or scarring, which is seen in conditions like cirrhosis. It's commonly used to assess liver health without the need for a biopsy.

3. MRI of Abdomen:

o Magnetic Resonance Imaging (MRI) provides detailed images of the liver and other abdominal organs. MRI is highly sensitive in detecting liver abnormalities, including fat accumulation, fibrosis, and tumors. It can also be used to assess blood flow in and around the liver.

4. Liver Function Test (LFT):

o This blood test evaluates various enzymes, proteins, and substances produced by the liver, such as ALT, AST, ALP, bilirubin, and albumin. Elevated liver enzymes (ALT and AST) can indicate liver inflammation or damage.

5. Fasting Lipid Profile:

o This blood test measures levels of cholesterol, triglycerides, and other fats. It is often used in conjunction with liver tests, as fatty liver disease can be associated with abnormal lipid levels, particularly high triglycerides.

6. Liver biopsy

o Liver biopsy is considered the **gold standard** for diagnosing various liver diseases, particularly for assessing the extent of fibrosis, inflammation, or fat accumulation. However, it is an invasive procedure and can lead to several potential complications

TREATMENT

non-alcoholic fatty liver disease (NAFLD) and its more severe form, **non-alcoholic steatohepatitis (NASH)**, have indeed become major health concerns leading to chronic liver disease. Despite their increasing prevalence, there is still no **FDA-approved medication** specifically for NAFLD or NASH. This reflects the complexity of these conditions and the challenge of finding effective treatments

The current treatment for **non-alcoholic fatty liver disease (NAFLD)** focuses primarily on **lifestyle modifications** and managing associated conditions, as there is no specific FDA-approved medication for NAFLD itself. Here's a breakdown of the current standard of care:

1. Lifestyle Modifications:

Weight Loss:

- Weight reduction is the most effective treatment for NAFLD. Losing 7-10% of body weight can significantly improve liver fat, inflammation, and fibrosis, especially in patients with non-alcoholic steatohepatitis (NASH).
- Gradual weight loss (1-2 pounds per week) is recommended. Rapid weight loss may worsen liver inflammation.

Diet:

- A Mediterranean diet rich in fruits, vegetables, whole grains, fish, and olive oil has shown beneficial effects on liver fat and overall metabolic health
- Avoiding refined carbohydrates, sugars (especially fructose), and trans fats is recommended.
- Calorie restriction is crucial for weight management, typically with a goal of a 500-1,000 calorie deficit per day.

Exercise:

- Regular physical activity helps reduce liver fat, even without significant weight loss.
- Both aerobic exercise (e.g., walking, running, cycling) and resistance training (e.g., weightlifting) have been shown to improve liver fat and insulin resistance.
- Aim for at least **150-300 minutes** of moderate-intensity aerobic activity per week.

2. Management of Associated Conditions:

Diabetes and Insulin Resistance

- **Metformin** is commonly used to manage insulin resistance, although it has limited direct effects on liver fat or inflammation. However, improving insulin sensitivity can prevent progression to NASH.
- **GLP-1 receptor agonists** (e.g., liraglutide, semaglutide) are increasingly used for patients with type 2 diabetes and NAFLD. These medications promote weight loss and may have beneficial effects on liver fat and inflammation.
- **Pioglitazone** (a thiazolidinedione) has shown some benefits in improving liver histology in patients with NASH, particularly in those with diabetes or pre-diabetes, though its use is limited due to side effects like weight gain and fluid retention.

Dyslipidemia:

• Statins are recommended for treating high cholesterol in NAFLD patients and are generally considered safe, even in patients with mild liver disease. Statins do not worsen liver function and help reduce cardiovascular risk.

• Omega-3 fatty acids may also help reduce triglyceride levels in patients with NAFLD.

Hypertension:

• Blood pressure control is crucial, as cardiovascular disease is the leading cause of death in NAFLD patients. Standard antihypertensive drugs (e.g., ACE inhibitors, ARBs) can be used.

3. Pharmacological Interventions (Experimental or Off-Label Use):

While there are no FDA-approved drugs specifically for NAFLD, several medications are used off-label or in clinical trials:

Vitamin E.

• In non-diabetic patients with biopsy-proven NASH, high-dose **vitamin E** (800 IU/day) has shown improvements in liver histology, particularly in reducing inflammation and fat. However, long-term safety concerns, such as an increased risk of prostate cancer, limit its widespread use.

Pioglitazone:

• Pioglitazone (used in diabetes) may improve liver inflammation and fibrosis in NASH patients but is associated with side effects like weight gain and fluid retention.

GLP-1 Receptor Agonists:

• Drugs like **liraglutide** and **semaglutide** (approved for diabetes) have shown promise in clinical trials by reducing liver fat, promoting weight loss, and improving metabolic health. They are increasingly used in obese patients with NAFLD.

4. Avoiding Hepatotoxic Substances:

- Patients with NAFLD should avoid **alcohol**, as even moderate alcohol consumption can accelerate liver damage.
- Avoiding medications that can harm the liver (e.g., certain pain relievers like acetaminophen in high doses) is also advised.

5. Monitoring and Surveillance:

• Regular monitoring of liver function tests (LFTs), imaging (e.g., ultrasound, FibroScan), and metabolic risk factors is important for tracking disease progression.

• Patients with advanced fibrosis or cirrhosis should be screened for complications such as liver cancer (hepatocellular carcinoma) and portal hypertension.

AYURVEDIC PERSPECTIVE ON NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD)

Acharya Madavakara has given a better definition for nidana that is a particular factor can be called as nidana only when it will develop a complete disease process in the body either immediately or after a certain period. Thorough knowledge of nidana is very much essential to understand and treat the disease. Direct correlation for Non Alcoholic Steatohepatitis (NASH) with ayurvedic disease condition is not available so here attempt as been done to analyze the nidana said for santarpana vyadhi, parameha and medoroga (athisthoulya) and could be anticipated as the nidana for the initial process of fat accumulation in the liver and yakrutodara nidanas, yakrit roga nidanas of madavakara, bhavaprakasha yakrit roga nidana is collectively assed for further process of NASH

According to the references it is strongly believed its associated with obesity, type 2 diabetes mellitus, insulin resistance, hyper lipidemia, hypertension, metabolic syndrome etc and also insulin resistance, NASH is specially associated with central(visceral) type obesity rather than general obesity.

Tarpana means saturation or satisfaction and santarpana is satiating which means supplying anything in to excess. Over nourishment (santarpana) or under nourishment (apatarpana) is the cause behind the disease manifestation. The disease NASH may be considered as santarpanajanya vyadhi.

Dietary habits will have its strong impact on disease manifestation as shareera is made up of aahara and disease also manifests because of aahara. Acharyas have specified about matravat aahara, ahara vidivishesha ayatanas, pathya ahara, viruddha aahara etc. heena and atimatra of aahara both are not wholesome to the shareera

Acharya charaka has explained about santarpanajanya vyadhi nidana in chapter as fallows Snigdha ahara, Madhura ahara, Guru ahara, Pichila ahara, Navanna Navamadhya, Anupamamsa, Gorasa, Goudika, Pishtanna, Atimatra ashana, Chesta dwesha, Divaswapna, Shayya sukha, Asana sukha etc

Madavakara has explained about medoroga where nidanas are explained as follows avayayama,diwaswapna,sleshmala ahara sevana, madhura annarasa and Sneha ati sevana all these do medo dhatu vruddi in shareea this meda vruddi takes place around the waist region and there is a central adiposity. Many patients may be weighing normal weight and BMI also within normal but still found to be having central obesity and victim of fatty liver.

Samptrapthi ghatakas

1. Dosha: kapha,pitta, vata

2. Dushya: Rasa, Rakta, Medo dhatu

3. Agni: Jataragni and Rasa Rakta and Medo dhatvagni mandhyata

4. Amaa: Jataragni mandhya janya, Dhatvagnimandya janya ama

5. Srotas: Rasavaha Raktavaha Medovaha

6. Srotodusti prakara: Sanga, vimarga gamana

7. Udbhava sthana: Amashaya

8. Sanchara sthana: Rasayani

9. Vyakta sthana: Yakrit

10. Vyadhi swa bhava: Chirakari

11. Roga marga: Abhyantara

12. Sadhyasdhyata: kasthtasadhya

Chikitsa

"Yaa kriya vyadhi harani sa chikitsa nigadhyate" (vaidyaka shabhda sindhu) the measures adopted for the removal of the disease is called as chikitsa. First and foremost is "Sankepat kriya yogo nidana parivarjana²¹⁴" avoiding the cause itself is the chikitsa. Second is "Samprapthi vighatana meva chikitsa" breaking samprapthi itself is the chikitsa of the roga.

Treatment of any disease follows these three ways

- 1. Nidanaprivarjana
- 2. Shamshodana
- 3. Shamshamana

In ayurveda chikitsa paddati the prime importance is given to nidanaparvarjan because nidana is adi karana for the disease manifestation that has to be avoided. Acharyas have mentioned that simple avoiding cause itself is the chikitsa in some of the disease.

As the disease NASH is manifesting as the further stage of NAFLD ,where in NAFLD the physical inactivity, high dietary calorie intake, etc are mentioned as the risk factors so considering all these factors its very much essential to do nidan aparivarjana in NASH so further deterioration of liver functions can be halted.

Avoid the highly saturated fatty foods, calorie rich food, fructose and glucose rich food, preserved food, the beverages rich in fructose concentration and minimum physical exercise is must because the sedentary life style is also becoming the leading cause for NAFLD/NASH according to the studies.

In shakashrit kamala chiktsa acharya charaka has quoated the sloka "sleshmana vridda marga tat pittam kapha harai jayet" this quotation may fits in NASH chikitsa, as there is avarodha for the pitta by kapha dosha which is increased because of guru, snigdha, sheeta, madhura ahara and vata increased by vyayama and vegadharana. So kaphahara chiktsa need to be followed.

The shaman yoga mentioned in samhitas is as follows:

Choorna

- Rohitakadya choorna
- Guduchyadi choorna
- Shankanabhi choorna
- Yavanyadi choorna
- · Laghuhingvadi choorna
- Sindvadi choornam
- Ksharabhavita pippali
- · Guda pippali
- Ksharapippali
- Bruhat ksharapippali

Kwata yoga

• Rohitakaabhaya kwata

- Shobanjana kwata
- Shalmali pushpa kwata
- Sharapunka moola kwata

Ghrita yoga

- · Rohitaka ghrita
- Snuhiksheera ghritam
- · Rohitaka shatphala ghritam
- Chitrakadi ghrita
- Pippalyadi ghritam
- Vannishatphala ghritam
- · Chitraka ghrita
- · Maharohitaka ghrita
- · Brahma ghrita
- · Rohitakadhya ghrita

Rasaoushadi 1

- · Shankanabhi basma
- Plehankata rasa
- · Rasaraj rasa
- Vaasukibhushana rasa
- Lokhanath rasa
- Pleehari rasa
- Yakritpleehari loham
- Mahamruthunjaya loham
- Shankadrava rasa

Lavana kaplana

- Arka lavana
- Agnimukha lavana
- Abhayalavana

Vati kalpana

- Bhallatakadi modaka
- Bhallataka modaka
- Abhayavataka

CASE-1

- Reason for consultation- c/o discomfort in right side of upper abdomen region, also c/o distension of the abdomen, indigestion on and off since few months
- History of present illness- 50 year old male patient driver by occupation was apparently normal started to notice mild discomfort in right side of the upper abdomen and gradually distension of abdomen and indigestion. For the same complaint underwent USG of abdomen and pelvis on doctor advice and found grade II fatty liver change in the report.
- Past medical history -N/K/C/O Diabetes Mellitus, Hypertension, Hypothyroidism.
- Family history-Not significant
- Personal history-Mixed diet, food intake at irregular time, sound sleep, bowel habits are irregular hard stools, constipation on and off.
- History of addictions- tobacco since 40years
- Physical examination
 - a. BP-130/80mmHg
 - b. HR-74/min
 - c. BMI-32.6kg/m2
 - d. Waist circumference-116cms
 - e. General appearance-no distress
 - f. Cardiovascular system examination-no murmurs
 - g. Respiratory system examination -clear
 - h. Abdomen examination- central obesity, mild tenderness in right hypochondriac and epigastric region. no hepatomegaly, no shifting dullness.
 - i. Skin examination-no spider navi.

Reports and Results

Grade II fatty liver on 28/1/2023 repeat scan done on 18/11/2023 showed Grade I fatty liver. In this case the patient was a driver was and was having food at irregular timing after administration of kaidaryadi ghanavati for 10 month the garde II fatty liver changed to Grade I. here patient was not doing any physical exercise and was completely depending on the medicine so it took long time for changing from grade II to Grade I. even though there was Grade I fatty liver but symptomatically patient was completely normal.

CASE-2

- Reason for consultation- Grade I fatty liver in USG of abdomen.
- History of present illness- 40year old male patient underwent master health check up and found fatty liver change in the imaging with the blood sugar levels above the normal limit.
- Past medical history-Not significant, No h/o Jaundice, or viral hepatitis.
- History of Medication: not on any steatogenic medications
- Family history- parents were diabetics
- Personal history-Vegetarian, good appetite, sound sleep, bowel habits are regular.
- History of addictions- non alcoholic and not a smoker.
- Physical examination
 - i) BP-130/80mmHg
 - ii) HR-74/min
 - iii) BMI-27.7kg/m2, Over weight
 - iv) Waist circumference-102 cms
 - v) General appearance-no distress
 - vi) Cardiovascular system examination-no murmurs
- vii) Respiratory system examination -clear
- viii) Abdomen examination- central obesity, no hepatomegaly, no shifting dullness
 - ix) Skin examination- no spider navi.

Report and Results

USG abdomen done on 4/11/2023 was found to be Grade I fatty liver, liver enzymes were also within normal limit and his HbA1c was 11.60%. patient was completely normal not had any symptoms of Diabetes mellitus.

Started with Nimbatwagadi ghanavati for 3 months then found to be changes in the HbA1c report from 11.60% to 7.6%.

Here patient had family history of diabetes so changes of getting diabetes was also more after starting this ghanavati his blood glucose levels are reduced.

CASE-3

- Reason for consultation- c/o loss of appetite, mild pain abdomen -1 week
- History of present illness- 30 year old male patient by occupation he was business man apparently normal started to notice loss of appetite, mild pain abdomen since 1 week For the same complaint visited to our hospital. USG abdomen and laboratory investigations done and found grade I fatty liver change in the report with the blood sugar levels above the normal limit.
- Past medical history -N/K/C/O DM, HTN, Hypothyroidism, no H/o Viral hepatitis and steatogenic medication intake.
- Personal history-Vegetarian, madhura rasa pradhana ahara sevana,good appetite, sound sleep, bowel habits are regular.
- History of addictions- non alcoholic and not a smoker.
- Family history-not significant
- Physical examination
 - x) BP-130/70mmHg
 - xi) HR-78/min
- xii) BMI-33kg/m2, class I obese
- xiii) Waist circumference-108cms
- xiv) General appearance-no distress
- xv) Cardiovascular system examination-no murmurs
- xvi) Respiratory system examination-clear

- xvii) Abdomen examination- central obesity, no hepatomegaly, no shifting dullness.
- xviii) Skin examination- no spider navi.

Patients was not doing physical exercise and having more madhurarasa pradhana ahara so that may be the reason for the fatty liver and increased blood glucose levels.

Reports and Results

Grade I fatty liver with hepatomegaly and HbA1c was 8.5% in the month of august 2023 after starting treatment with Nimbatwagadi ghanavati for 3 months in the month of October 2023 the liver size came to normal and HbA1c was reduced to 7.1%.



Chapter 7

An Ayurvedic Approach to Management of Chronic Kidney Disease: A Case Series

Dr. Ashwini Sajjanavar

Assistant Professor, Dept of Kayachikitsa, BLDEA'S AVS Ayurveda Mahavidyalaya Vijayapur.

Acronyms

PKD- Polycystic Kidney Disease

ADPKD- Autosomal dominant polycystic kidney disease

ARPKD-Autosomal recessive polycystic kidney disease.

ESRD- End stage Renal Disease

CKD- Chronic Kidney Disease

DKD/DN- Diabetic Kidney Disease/ Diabetic Nephropathy

AKI- Acute Kidney Injury

GN- Glomerulonephritis

INTRODUCTION

In the present era some diseases are prevailing world wide with large number of complications. Among such disorders Chronic Kidney Disease is one.

Chronic Kidney disease has become most lingering disease caused due to several factors like

- Age more than 65 years,
- Diabetes type 1 and 2,
- Family history of renal disease,
- Autoimmune disease, Systemic infections,

- Urinary tract infections/stones Urinary tract obstructions,
- Recovery of acute kidney injury, Hypertensives
- Drug abusers: Nonsteroidal anti-inflammatory drugs, analgesics/ heroin,
- Neoplasia, and Low birth weight Reduced kidney mass etc.
 - The signs, symptoms and metabolic derangements of Chronic Kidney Disease may be either due to alteration of the normal homoeostatic functions of the kidney, or accumulation of the nitrogenous endproducts of protein catabolism, i.e. the Uraemic toxins which produce the clinical syndrome of 'Uraemia', characterized by Edema, Pruritis, Nausea, Hypertension, Generalized weakness and Deranged GFR levels

PREVALENCE

- The global estimated prevalence of chronic kidney disease is 11 to 13.4%. In India prevalence rate is 9.94%. In Karnataka specially in rural belt 3.82% prevalence of diabetes and 33.62% of hypertension. It is found 6.3% prevalence of chronic kidney disease stage 3.
- Chronic Kidney Disease is having a different domains of etiological factors which includes Diabetic Nephropathy (31.2%), Undetermined (16.4%), Chronic Glomerulonephritis (13.8%), Hypertension (12.8), Tubule-Intestinal disorders (7%), Autosomal dominant Polycystic Kidney Disease (2.5), Obstructive Uropathy (3.4%), Renovascular diseases (0.8%), Kidney Transplant Graft loss-AV fistula (0.3%), Others (11.7%)
- The conventional approach of management includes dialysis and renal transplantation, which are not affordable by Indian population mainly due to economic reasons. Therefore, exploration of a safe and alternative therapy is needed, which proves to be helpful in reducing the requirement of dialysis and in postponing the Renal transplantation.
- Mean annual costs per patient increased considerably more from early stages versus dialysis(stage 3 mean: \$3060 versus haemodialysis, mean: \$57,334; peritoneal dialysis, mean: \$49,490) with estimates for annual costs of transplant also substantially higher(incident: \$75,326; subsequent: \$16,672).

Anatomical Aspect:

Charaka opines that Srotas when normal they are having the color of the element they carry, tubular in structure either large or minute, elongated or reticulated in appearance. Acharya Charaka mentioned the Basti and Vankshana as mula of Mutravaha Srotas and Acharya Sushruta considered Basti and Medhra.

• Physiological aspect:

The main function of Mutravaha Srotas is production of Mutra. Expelling out the liquid excretory products through Mutra. It carries the Kleda tatwa of the body - so "Mutrasya Kleda Vahanam. This Mutra does filling of Basti (Basti Purana) and gives Mardavata or Mrudutwa to Basti. Whatever Udaka or Kleda is produced after the digestion is further gets transformed or metabolized into Mutra in Mutravaha Srotas. So "Srotamsi khalu Parinama mapadyamananam Dhatunam abhivaheeni" can be understood here.

Before understanding the Vikruti one should have proper knowledge of Prakruti Jnana, hence an effort is made to obtain clear picture about Mutravaha Sroto Shareera. So that we can manage different conditions of Obstructive, Nonobstructive and Irritative disorders of Genito Urinary system. Acharyas have used the terms like Vrukkou, Gavini, Basti, Mutra praseka, Mutravaba Srotas, Mutravaha Dhamani, Mutravaha Sira, and Mutra vaha Nadi in relation to explain Urinary system. The word 'Gavini' is available in Atharva Veda only.

NIDANA:

❖ ATI VYAYAMA: Vyayama kala and matra: In our classics proper time and amount of exercise that has to be done. Ativyayama will result in kshaya, prathamaka, raktapitta, chardi, atisara etc. Here it can be taken as when a person is doing excess work beyond his capacity, will result in dehydration, electrolyte imbalance and lactic acidosis. Shoshana of Jaleeya Dhatu results in Vata Prakopa. Fluid and electrolyte imbalance may result in pre renal failure.

Body Fluids and Salt in Exercise: As much as a 5- to 10-pound weight loss has been recorded in athletes in a period of 1 hour during endurance athletic events under hot and humid conditions. Essentially all this weight loss results from loss of sweat. Loss of enough sweat to decrease body weight only 3 per cent can significantly diminish a person's performance, and 5 to 10 per cent rapid decrease in weight can often be serious, leading to muscle cramps, nausea, and other effects. Therefore, it is essential to replace fluid as it is lost81.

Effect of exercise on renal parenchyma: Sternous exercise causes a sequential increase in free radical level. Oxygen free radicals play a crucial role in the pathogenesis of ischemic AFR. Oxygen free radical has a vasoconstrictive function leading to reduced glomerular filteration rate by directly inactivating cyclo-oxygenase in the epithelial cell. Exercise causes increased level endothelin, catecholamines, angiotensinII, arginine, vasopressin, endotoxin, cytokines this exercise induced mediator also facilitate renal ischemia leading Chronic renal failure.

• TEEKSHNA AUSHADHA: Aushadha Dravya is categorized in two different headings namely, Bheshaja and Abheshaja. Dosage of a drug is determined on the basis of Dravya, Guna and Karma. Tikshna substances are those which are responsible for the Daha, Paka and Srava. Any drug, capable of producing Daha, Paka and/ or Srava in Basti Avayava may bring about acute or Chronic Kidney Disease.

The nephrotoxic drugs are the best examples in the present era. Bhavaprakasha while commenting on this word has mentioned that "Tikshna – Ausadha – Rajika Suranadik Yuktam" intake of food having excess of Rajika, Surana are causative factor of Mutrakricchra.

Relation between Beshaja and Chronic kidney Disease:

Rasatargini has been quoted the intake of drugs like tamra when taken without proper shodhana it produces acute symptoms like death. Dravya having high potency are not selected according to the disease; if they are taken in excessive quantity will lead to vitiation of vata which may ultimately result in Mutraghata.

In present era nephrotoxicants can act at different sites of the kidney resulting in the altered renal function. Analgesic nephropathy results from the long-term use of compound analgesic preparations containing phenacetin, aspirin, and caffeine. In its classic form, analgesic nephropathy is characterized by renal insufficiency, papillary necrosis attributable to the presumed concentration of the drug to toxic levels in the inner medulla, and a radiographic constellation of small, scarred kidneys with papillary calcifications best appreciated by computed tomography.

Patients may also have polyuria due to impaired concentrating ability and non-anion-gap metabolic acidosis from tubular damage. Shedding of a sloughed necrotic papilla can cause gross haematuria and ureteric colic due to ureteral obstruction. Individuals with end-stage kidney disease as a result of analgesic

nephropathy are at increased risk of a urothelial malignancy compared to patients with other causes of renal failure.

Relation between Abeshaja and Chronic Kidney Disease:

Abeshaja is alienated into Badhana and Saanubadha. Here badha means that which give rise to the diliterious effect and there by discase or decease. The effects of Abheshaja may be like Visha, Shastra, Agni or Ashani. Like Visha (poison) dravya may bring about Samjnyanasha (unconsciousness). Like Shasta (armament) dravya may bring about Marmaccheda (destructs vital organs). Like Agni (blaze) dravya brings about Sphota (blister). Like Ashani (thunderbolt and lightning) dravya may result in Sadyonashaka (imminent death)84. Abheshaja dravya may affect any srotas/avayava in Shareera. Mutravaha srotas/Basti, when afflicted by Abheshaja dravya may result in Acute or Chronic Kidney Disease.

Various perspectives of Asatmya and its relation with Chronic Kidney Disease:

The dravya which is conducive to the body is called Satmya which is also called as Ekantha hita. The contrary to the Satmya i.e, the dravya which is detrimental to shareera dhatu and which brings about ill health is Asatmya. Asatmya is also considered as Ekantha Ahita. The effects of Ekantha ahita are like Agni, Kshara or Visha. Ekantha ahita may cause Dahana (inflammation) like Agni (blaze), Pachana (necrosis) like Kshara (Strong alkali), or Marana (death) like Visha (Poison). Dushi visha is like Asatmya. The dravya which bring about dushana of the dhatu is Dushi visha. Dushi visha is not a potent poison which can not bring about harmful effect immediately. Asatmya/Ekanta ahita/Dushi visha dravya may affect any srotas/avayava in Shareera. Mutravaha srotas/Basti, when afflicted by Asatmya/Ekanta ahita/Dushi vishadravya may result in Acute or Chronic Kidney Disease.

Various perspective of Viruddha and its relation with Chronic Kidney Disease: Dravya in combination may express deleterious effect over the body. In other words, only the blend of two or more dyavya has untoward effect on the body, not the dravya in separation. The combination of the dravya will provoke/excite the Dosha but is not barred out of the body. Such combination of the dravya is called as Viruddha. Viruddha dravya also has a detrimental effect over the Dhatu because of its special ability even without aggrevating the dosha.

Gara visha is similar to viruddha. Combination of Nirvisha dravya or Savisha dravya results in deleterious effect over the body. The effect of the Viruddha

is like Visha or Garavisha. Viruddha may bring about sudden distress and may lead to sudden death. At the same time, the Viruddha may also exhibit some chronic illness and suffering of an individual. Viruddha/Garavisha may affect any srotas/avayava in Shareera. Mutravaha srotas/Basti, when afflicted by Viruddha/Gara visha may result in Acute or Chronic Kidney Disease.

* RUKSHA MADYA PRASANGA: Continuous use of excess quantity of ruksha variety of Madhya leads to Mutrakricchra. Madya prepared out of dravya having qualities such as Rooksha, Laghu, Khara, Teekshna, Ushna, Sthira, Apicchila and Katina mostly considered as Ruksha Madya.

Madya in general has amla rasa, ushna virya and amla vipaka but few Madya depending upon the method of preparation it acquires ruksha guna i.e madya which is been prepared out of dhataki pushpa is ruksha, hridya and agni deepaka. Madya prepared out of tandula of yava is said to have ruksha property is vatapittakara. Naveena Madya is vatavardaka. Madya is having opposite qualities of Ojus, when taken in excess quantity continuously leads to destruction of Ojus. Thus Oja-kshaya leads to Vata prakopa thus providing a base for causing Mutraghata.

Alcohol can be of two forms one is ethyl alcohol which contain ethnol and methyl alcohol which contain methanol. Alcohol are hydroxyl derivatives of alphatic hydrocarbons. When unqualified, alcohol refers to ethyl alcohol or ethnol. Pharmacology of alcohol is important for its presence in beverages and alcohol intoxication rather than as drug. Diuresis is often noticed after alcohol intake. This is due to water ingested with drinks and alcohol induced inhibition of ADH secretion. Chronic alcoholism (Not following the guidelines for safety drinking) than that leads to hypertension and also will lead to cardiomyopathy in turn long standing hypertension will cause Chronic Kidney Disease.

❖ NITYA DRUTA PRISHTAYANA: Bhavapraksha while commenting on this term mentions that Druta Prsthayanat-Ashvadi Gamanat i.e to ride on fast moving animals like horse etc daily or frequently causes Mutrakricchra. The same description is termed with the word 'Abhikshatasya' by Charaka as Mutravaha Sroto dusti Karana.

Riding horse or other such animals directly involves the saddle area which may result in injury to the Mutravaha Srotas. The sites of Vata and Apanavata being the same i.e Pakwashaya. Pakwashaya is in proximity with saddle area. There is chance of provocation of Vata Dosha to the maximum extent. Mutra

Vikara, Shukra Vikara, Arshas, Gudabhramsha etc are considered to be the resultant of abnormal Apana Vata.

❖ ANUPA MATSYA: Anupa desha refers to marshy land which is characteristic of heavy rainfall in a year. Acharya vagbhata explains that matsya are parama kaphakaraka. All the living creatures will be having constitutionally Kapha Pradhana Dosha in general. Creatures of such marshy land are Maha-abhishyandi by nature. Maha-abhishyandi Ahara irresponsible for excessive Kledatva in Dosha, Dhatu, Mala and Srotas. Abhishyandi also causes Srotorodha. Thus producing favourable conditions in the various body part for various diseases.

Kleda is Shareeragata jaleeya bhaga. Mutravaha srotas is in relation with jaleeya dhatu and through which it is in relation with sarvasrotas. Tha dhatugata kleda is jalaroopi and is in association with Ambuvaha srotas. Basti is the Vishrama sthana of Ambuvaha srotas i.e, Ambu gets cleansed in Basti. Shareeragata kleda reaches the Basti and may vitiate the Basti avayava resulting in Acute or Chronic renal diseases.

❖ ADHYASHANA AND AJEERNASHANA: Consuming food before the digestion of previous meal is Adhyashana. This is a transient phenomenon as the function of Agni is adequate. The term 'Ajeernashana' refers to the consumption of food articles where the person suffers from the state of indigestion. In the state of Ajeernashana, there will be impaired functions of Agni and it needs medications for the correction of Agni. Improper dietetic habits lead to the production of Ama in the body thus lead to Sroto avarodha, which is one of the main causes for Vata vitiation. Depending upon the Khavaigunyata it may produce disease. If Khavaigunyata is observed in the Basti, it may result in Acute or Chronic Kidney Disease.

Adyashana is Ati santarpana and results in Sthoulya. A person suffering from the Sthoulya is likely to develop several complications such as Prameha pidaka, Bhagandara etc. Most of the complications in Sthoulya are because of the Margavarana by Kapha dosha and Medo dhatu. Margavarana in Basti avayava results in different kinds of Mutra roga.

Obesity related complication on various systems. Obesity induced effect on Cardiovascular system leading to chronic kidney disorder are as follows.

Hypertension: The kidney is both a target and a cause of hypertension. Primary renal disease is the most common etiology of secondary hypertension Mechanisms of kidney-related hypertension includes a diminished capacity to

excrete sodium, excessive renin secretion in relation to volume status, and sympathetic nervous system over activity. Conversely, hypertension is a risk factor for renal injury and end-stage renal disease. The increased risk associated with high blood pressure is graded, continuous, and present throughout the distribution of blood pressure above optimal pressure. Renal risk appears to be more closely related to systolic than to diastolic blood pressure, and black men are at greater risk than white men for developing ESRD at every level of blood pressure. Proteinuria is a reliable marker of the severity of Chronic Kidney Disease and is a predictor of its progression. Patients with high urine protein excretion (>3 g/24 h) have a more rapid rate of progression than do those with lower protein excretion rates. Atherosclerotic, hypertension-related vascular lesions in the kidney primarily affect preglomerular arterioles, resulting in ischemic changes in the glomeruli and post glomerular structures. Glomerular injury also may be a consequence of direct damage to the glomerular capillaries due to glomerular hyperperfusion. With progressive renal injury there is a loss of autoregulation of renal blood flow and glomerular filtration rate, resulting in a lower blood pressure threshold for renal damage and a steeper slope between blood pressure and renal damage. The result may be a vicious cycle of renal damage and nephron loss leading to more severe hypertension, glomerular hyperfiltration, and further renal damage. Glomerular pathology progresses to glomerulosclerosis, and eventually the renal tubules may also become ischemic and gradually atrophic. The renal lesion associated with malignant hypertension consists of fibrinoid necrosis of the afferent arterioles, sometimes extending into the glomerulus, and may result in focal necrosis of the glomerular tuft.

Obesity may result in glomerulonephropathy and is as follows:

There are many forms of glomerular disease with pathogenesis variably linked to the presence of genetic mutations, infection, toxin exposure, autoimmunity, atherosclerosis, hypertension, emboli, thrombosis, or diabetes mellitus. Systemic hypertension and atherosclerosis can produce pressure stress, ischemia, or lipid oxidants that lead to chronic glomerulosclerosis. Malignant hypertension can quickly complicate glomerulosclerosis with fibrinoid necrosis of arterioles and glomeruli, thrombotic microangiopathy, and acute renal failure. Diabetic nephropathy is an acquired sclerotic injury associated with thickening of the GBM secondary to the long-standing effects of hyperglycemia, advanced glycosylation end products, and reactive oxygen species.

❖ MUTRITODAKA BHAKSHANA/STREE SEVANA: Faulty habits of an individual may land up in complications. Devouring food or indulging in sexual intercourse by a person having the urge for micturation. Vegadharana and indulging in activity definitely provokes Vata dosha. That too, Mutravegadharana and act of sex or consuming food will provoke Apana vata.

Such acts during urge for micturition may result in secondary cause of vesicoureteral reflex. Secondary vesicoureteral reflex stems from a high pressure causing backward flow of urine from urinary bladder to Ureters and if severe enough, back to the kidneys. An infection from urinary bladder spreads to upper urinary system and even may result in Pyelonephritis.

❖ MUTRA VEGARODHARANA: Supression of urge of micturition is one of the important causes of Mutravaha sroto dusti. The Apana Vata is seated in pelvic region, is responsible for excretion of urine. Any impairment in its function such as Pratiloma-gati, leads to various affliction of Mutravaha Srotas such as Mutraghata, Ashmari, Prameha etc.

All the conditions which cause Patihanyate – obstruction to the Mutravega like Mutrajatara, Vatabasti, Mutraosanga, Mutraatita, Vata astila, Raktaja granti and Vatakundalika etc will also have the similar effect over the Mutravaha srotas. Viguna gati or Pratiloma gati of Vata is similar to the understanding of vesicoureteral reflex

❖ KSHEENA PURUSHA: 'Ksheenasya' i.e Ksheena purusha. Ksheena purusha is susceptible to develop Mutravaha sroto dusti. Ksheena refers to Ksheena kaya as well as Bala ksheena. Bala is of two kinds. Bala refers to the bulk/physique of an individual obtained by Vyayama. Bala also refers to Abhyantara bala i.e, Ojas.

In the present context Bala should be considered as Abhyantara bala. There are different factors attributed for Bala heena or Durbala. They are Swabhava, Dosha and Jara. Swabhava refers genetic factors, Dosha refers to diseases due to lifestyle and environmental factors and Jara refers to geriatric issues.

Genetic factors of illness depends on the Karma of an individual. The very existence of every creature born is because of Karma – Past life deeds. The sins of past life may vary –less or more. When there is durbala karma, there will be family history of illness either rooted to one of the parent. When there is balavan karma, there will not be family history for the illness, suffering from less or durbala karma will explain the genetic susceptibility where as more or

balavan karma will indicate the mutation. Kshaya as a consequence of Dosha prakopa, primarilyindicates dhatukshaya because of chronic diseases or dhatu kshaya secondary to Margavarana related diasese.

Dhatu kshaya clinically manifest in two ways. Sadya (sudden) or Chira (gradual) . Most important cause of sadya dhatu kshaya is because of Udaka kshaya – either Udaka or rasa and rakta kshaya. All the causes which results in volume loss are considered as Kshaya hetu. Shonita srava, mala atipravrutti are the important among them. Mutraghata is one of the upadrava of vishoocika and is because of sadhya ksheena hetu.

❖ ABHIKSHATHA: A person suffering with injury to the organs of Mutravaha Srotas are no doubt will suffer from Mutraghata and related complaints. Any injury to them will to bladder distension, urine retention.

Basti is sadhyapranahara marma. Injury to the basti results in grave disorders. They are Mutra dosha, Vata Mutra varca sangraha, Mehana basti shula, Gulma, Kukshi guda sroni graha etc diseases.

The etiologies of prerenal azotemia include any cause of decreased circulating blood volume (gastroint estinal hemorrhage, burns, diarrhea, diuretics) volume sequestration (pancreatitis, peritonitis, rhabdomyolysis) or decreased effective arterial volume (cardiogenic shock, sepsis).

Renal perfusion also can be affected by reductions in cardiac output from peripheral vasodilation (sepsis, drugs) or profound renal vasoconstriction [severe heart failure, hepatorenal syndrome, drugs such as nonsteroidal anti-inflammatory drugs (NSAIDs)]. True or "effective" arterial hypovolumia leads to a fall in mean arterial pressure.

GFR is maintained by prostaglandin-mediated relaxation of afferent arterioles and angiotensin II-mediated constriction of efferent arterioles. Once the mean arterial pressure falls below 80 mmHg, there is a steep decline in GFR leading to Chronic Kidney Disease.

INDICATORS OF RISK FACTORS

- · Weight loss
- Malignant hypertension
- Pruritis
- Anemia

- Uremic vomiting
- Hematuria



OTHER RISK FACTORS

SIGNS & SYMPTOMS

- Dourbalya Fatigue
- · Anavasthita udara utseda- Swelling
- Padashotha Pedal oedema
- Gandaakshi kootashotha- Periorbital edema
- Siratanutwa Prominent thin veins
- Angavivarnata Discolouration
- Sashoola mutrata- Dysuria
- Alpamutrata- oliguria
- Raktamootrata -Hematuria
- Cardinal features of Chronic Kidney Disease such as Pruritis, Edema, Hematuria,
- Weakness, Nausea.
- Abnormal Glomerular Filtration Rate levels.

DIAGNOSTIC CRITERIA:

Dourbalya – Fatigue, Anavasthita udara utseda- Swelling, Padashotha – Pedal oedema, Gandaakshi kootashotha-Periorbital edema, Siratanutwa – Prominent thin veins, Angavivarnata – Discolouration, Sashoola mutrata- Dysuria, Alpamutrata- oliguria, Raktamootrata –Hematuria.

- Cardinal features of Chronic Kidney Disease such as Pruritis, Edema, Hematuria, Weakness, Nausea.
- Abnormal Glomerular Filtration Rate levels.

STAGES OF CKD ON GFR LEVELS

STAGES	GFR LEVELS	
1	≥ 90 (Persistent protienuria)	
2	60-89	
3	30-59	
4	15-29	
5	<15	

DIAGNOSTIC AIDS

- Plain X-ray-Renal outlines, opaque calculi, calcification within renal tract.
- Ultrasound Renal size & position, detect dilatation of the collecting system, distinguish tumors and cysts and show other abdominal, pelvic & retroperitoneal pathology.
- In Chronic renal failure ultrasonographic density of renal cortex is increased and corticomedullary differentiation is lost.
- Renal Doppler-Blood flow in extra-renal & larger intra-renal vessels. Intravenous urography(IVU)- Provides excellent definition of the collecting system & ureters. Superior to ultrasound for examining renal papillae, stones & urothelial malignancy.
- · Pyelography
- Renal arteriography & venography –To investigate suspected renal artery stenosis hemorrhage.
- Computed tomography(CT.)— For characterizing kidney or combinations of cysts with masses.
- Magnetic resonance imaging (M.R.I.)-Good images of main renal vessels.

Othertests:

Radionuclide tests - These are functional studies requiring the injection of gamma ray emitting radiopharmaceuticals (99MTc-DTPA, 99MTc-DMSA) which are taken up and excreted by the kidney; a process which can be monitored by external gamma camera.

Renal biopsy - To establish the nature and extent of renal disease in order to judge the prognosis and need for treatment.

DIFFERENT CLINICAL CONDITIONS OF TYPES OF MUTRAGHATA:

- Mutroukasada- Renal vascular disease
- Mutrajatara Bladder Neck Obstruction
- Mutrakricchra Ejaculation Retrograde
- Mutrotsanga Urethral stricture
- Mutrasamkshaya Suppression of urine
- Mutraatita Neurogenic bladder
- Vataashtila BPH
- Vatabasti Underactive Neurogenic Bladder
- Ushnavata Jogger's Hematuria
- Vatakundalika Vesicoureteral Reflux
- Raktagranthi Urethral Polyps
- Vidvighata Enterovesical Fistula
- Bastikundala Vesicoureteric Reflux with CKD

INVESTIGATIONS

- Haemogram
- · Fasting Blood Sugar,
- Post Prandial Blood Sugar
- Renal Function test: Serum urea, serum creatinine, cystatin –c(Glomerular Filtration Rate)
- Urine routine and Urine microscopic examination
- HbA1C
- Lipid Profile
- · Serum Uric acid

SPECIFIC MODE OF CHIKITSA IN CKD:

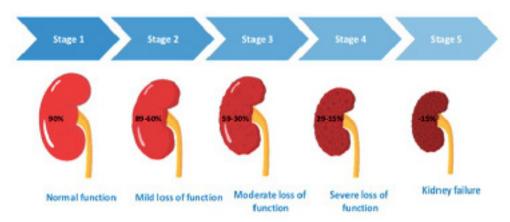
- Mutraghata chikitsa
- Raktapitta chikitsa

- Shotha chikitsa.
- Shonitaabhishyanda chikitsa
- · Raktadushti chikitsa
- · Asadhya Pandu

TREATMENT

- Primary prevention in persons 'at risk'.
- Early detection, delay progression to next stage.
- Delay/treat co-existing cardiovascular abnormalities.
- Manage chronic complications such as anemia, abnormal metabolism (calcium, phosphorus), improve nutrition, selective protein restriction, control B.P.
- Prepare for impending ESRD physically, emotionally & socioeconomically by: Early placement of vascular access (AV fistula) or CAPD catheter. Educate patient & family about RRT options. Explain financial implications.
- Initiate timely renal replacement therapy i.e. renal transplant, maintenance hemodialysis or peritoneal dialysis.

STAGEWISE FUNCTIONAL CHANGES OF CKD



CASE NO 1

- NAME OF THE PATIENT: VASANT BISNAL
- AGE: 46YEARS

- REG NO :7441
- DOA:19/4/2022
- History:
- k/c/o Hypertension since 10years
- k/c/o- Diabetes Milletus since 19 years

CASE-2

- NAME OF THE PATIENT: VINOD NAGARAHALLI
- AGE: 46 YEARS
- REG NO :2332
- DOA:25/3/2022
- History:
- K/C/O- Diabetes milletus & Hypertension since 5 years
- Swelling in right lower limb
- Poor appetite
- · Nausea, vomiting
- · Puffiness of face

TREATMENT GIVEN:

- 1. Dashamoola + punarnava + gokshura + amrita + yashtimadhu + shatavari + ashwagandha choorna. Boiled and prepared kashaya once daily for 20days
- 2. Gokshuradi guggulu 1-1-1

Before treatment:

- Serum creatinine 2.4mg/dl
- Urea- 46mg/dl

After treatment:

- Serum creatinine 1.4mg/dl
- Urea 35mg/dl

CASE-3

Case History:

Name of the patient : XYZ

Age : 32 YEARS

Reg no : 605

Main complaints:

· Cramps and Swelling in right lower limb

• Poor appetite from 1year

· Nausea, vomiting

· Gradual weight loss & decreased level of HB since 1year

• K/C/O Hypertension since 2years

• K/C/O Diabetes Milletus since 22 years

Duration: 1year

Personal history:
• Appetite: reduced

• Bowel: hard, once a day

• Bladder: 2-3 times a day, dysuria – present, scanty micturation

• Sleep: disturbed

· Habits: alcoholic

General examination:

- BP- 140/70mmHg
- Pulse- 76bpm
- RR- 20/min
- Pallor- +
- · Icterus- absent
- · Cynosis- absent
- Clubbing-absent
- Edema- bilateral pedal edema (rt>lt)

Diagnostic criteria:

- Subjects having classical common signs and symptoms of Mutraghata and Shotha:
 - Dourbalya Fatigue
 - · Anavasthita udara utseda- Swelling
 - Padashotha Pedal oedema
 - Gandaakshi kootashotha- Periorbital edema
 - Siratanutwa Prominent thin veins
 - Angavivarnata Discolouration
 - Sashoola mutrata- Dysuria
 - Alpamutrata- oliguria
 - Raktamootrata –Hematuria
- 2. Subjects having cardinal features of Chronic Kidney Disease such as Pruritis, Edema, Hematuria, Weakness, Nausea.
- 3. Subjects having abnormal Glomerular Filtration Rate levels.

Study design:

- Randomised open label clinical study.
- Sampling technique: The subjects who fulfill the inclusion criteria and willing to give written informed consent and willing to participate and comply with the study will be assigned to trial.
- · Permuted Block Randomization Method.

Assessment criteria:

- Signs and symptoms of Chronic Kidney Disease –
- Edema edema grading scale
- Pruritis- Pruritis grading system
- Hematuria Hematuria assessment scale
- Common fatigue scale
- Visual analogue scale fatigue severity
- Combined common Signs and symptoms of mutraghata, shotha: Dourbalya, Anavasthita udara utseda, Padashotha Siratanutwa, Salomaharsha,

Angavivarnata, Sashoolamutrata, Alpamutrata, Gandaakshikoota shotha, Raktamootrata

· Patients suffering from renal failure

Treatment given:

- Mustadi Yapana Basti
- ➤ Anuvasana with Sukumara ghrita + vastyamayantaka ghrita
- > Abhyanga with balaguduchyadi thaila.
- ➤ Gokshuradi guggulu

Investigations:

• Hb-

BT: 9.2gm/dl AT: 11.9gm/dl

• Urea:

Before treatment Urea- 75mg/dl After treatment Urea- 48.6mg/dl

· Serum creatinine-

Before treatment : Serum creatinine – 4.47mg/dl

 $After\ treatment\ :\ Serum\ creatinine\ -\ 3.3mg/dl$

SL NO	Parameters	BT	AT
1	Dourbalya – Fatigue	++	+
2	Anavasthita udara utseda- Swelling 2 1		1
3	Padashotha – Pedal oedema 2 1		1
4	Gandaakshi kootashotha -Periorbital edema	0	0
5	Siratanutwa – Prominent thin veins	0	0
6	Angavivarnata – Discolouration	0	0
7	Sashoola mutrata- Dysuria	+	AB
8	Alpamutrata- oliguria	1	0
9	Raktamootrata –Hematuria	0	0
10	Serum creatinine	2.6	1.4

CASE NO 4

Case History:

Name of the patient: XYZ

Age: 49 YEARS Reg no : 1284

Main complaints:

• Bilateral pedal oedema since 3-4months

- · Abdominal bloating
- · Decreased intake of food since 1month
- k/c/o- DM since 25years
- k/c/o- Hypertension since 3 years
- Underwent dialysis for 3times in September

Duration: 4 months

Personal history:

· Appetite: reduced

• Bowel: hard, once a day

• Bladder: 2-3 times a day, dysuria – present, scanty micturation

• Sleep: disturbed

• Habits: nil

General examination:

- BP- 150/90mmHg
- Pulse- 76bpm
- RR- 20/min
- Pallor- +
- Icterus- absent
- Cynosis- absent
- · Clubbing-absent
- Edema bilateral pedal edema (rt>lt)

Treatment given

Mustadi yapana basti :

Niruha: mustadi yapana basti churna kashaya

Madanaphala churna 10gms

Ksheera

Sneha

Madhu

Saindhava

• Anuvasana : Murchita ghrita & Murchita taila- 40ml each.

Investigations:

Hb-

BT: 9.2 gm/dl

AT: 10.8 gm/dl

UREA

Before treatment Urea- 45.8mg/dl

After treatment Urea- 42.9 mg/dl

Serum creatinine-

- Before treatment: Serum creatinine 2.28 mg/dl
- After treatment: Serum creatinine 2.02 mg/dl

FBS:

BT- 346

AT :232

PPBS:

BT-403

AT: 256

HBA1C-

BT: 11.5%

AT: 9.5%

GFR:

BT- 19

AT: 28

SL NO	Parameters	ВТ	AT
1	Dourbalya – Fatigue	++	+
2	Anavasthita udara utseda- Swelling	2	1
3	Padashotha – Pedal oedema 2		1
4	Gandaakshi kootashotha -Periorbital edema	0	0
5	Siratanutwa – Prominent thin veins 0 0		0
6	Angavivarnata – Discolouration	0	0
7	Sashoola mutrata- Dysuria	+	AB
8	Alpamutrata- oliguria	1	0
9	Raktamootrata –Hematuria	0	0
10	Serum creatinine	2.6	1.4

NIDANA FOR CKD

- Nidana of Mutraghata
- Nidana of Mutrakricchra
- > Nidana of shotha
- Nidana of Medoroga
- > Nidana of Prameha
- > Santarpanotta nidana
- Bheshaja & abeshaja nidana

Different clinical variants of CKD

- o Shonita abhishyanda
- o Asadhya vatarakta
- o Ama
- o Abhyantara vidradhi
- o Raktaja mutrakricchra
- o Shotha

- o Asadhya pandu
- o Sannipataja chardi

UNIQUE CHIKITSA FOR CKD

- Nidana parivarjana
- Based on clinical variants- mutraghata, shotha, prameha, shonita dushti, mutrakricchra
- Rakta & meda dushti chikitsa
- · Agni deepana chikitsa
- Balavardhana chikitsa
- Apana vayu chikitsa-Basti
- Raktamokshana

CHIKITSA SUTRA

 Aadau tu bhishaja karyam vicharyeva vidhanataha | Raktasammokshanam rogi rogayostu balabalam || Tatho virekaha swedashcha tatha mutralamuttamam | Rakta samshodhanam pushtikrut agnibalavardhanam ||" (Bhai.Rat.93/13-14)

Niragni Sweda the qualities of the drug play an important role and prepared Without using fire and indicated in MedaKapha Avarana conditions.

Swedana is indicated in Shotha and it is one of the chief complaints in Vrukka Roga we can consider the swedana as a treatment modality.

Raktamokshana is told as the first line of treatment, if and only if Rogi Bala is Pravara. Other wise In contemporary science it is highly unacceptable. As in CKD there will be less production of Erythropoietin hormone leading to the less Erythropoiesis.

Virechana is the second therapy in the sequence of Panchakarma, it is most widely used Shodhana procedure especially for Paittika Vyadhis. It is also useful in the disorders in which Pitta associated with Vata or Kapha. It is less tedious procedure than Vamana Karma and hence less possibility of complications and it could be done easily, hence it is widely practised Shodhana Karma in routine clinical practise.

In Vrukka Roga, Patients Agnibala and Shareera Bala will be comparatively very less.

In such condition of the Patient we cant plan for the classical Virechana.

Because performing any type of Snehapana may increase the Kledata in the body which worsens the condition of Patient.

Even according to contemporary science there will be Dyslipidemia in CKD patients, due to delayed catabolism of the Triglycerides.

But at the same time for the better absorption of the Aoushadha, Malanulomana and Srotoshudhatva is very essential.

So by considering all the factors, better to plan for Deepana, Pachana and Koshta Shodhana.

BASTI IN CKD:

- Chandanadi niruha basti
- · Kushadi panchamoola niruha
- · Kapharoga nashaka niruha
- Mustadi yapana basti
- · Mutrakricchra nashana niruha
- Kshara basti
- Swadamshtradi pancha praasrutika basti
- Punarnavadi niruha

MUTRALA DRAVYAS

- Mutrasangrahaneya
- Mutravirechaneeya
- Mutravirajaneeya
- Ashmarighna
- Raktasamshodhana & Raktapushti
- shonitasthapana gana
- · Agnivardhana chikitsa
- · Balavardhana chikitsa-Balya gana

YOGAS IN CKD:

1. TRINAPANCHAMOOLA KWATHA: B.R 34/20

- Kusha
- Kasha
- Sara
- Darbha
- Ikshu
- 25gms of their combined mix along with water measuring 400mlhaving boiled down to 1/8th
- Uses: Pittakrucchra(paittika type of dysuria), bastivishodhana(cleansing the urinary bladder.
- Dosage: 50ml kwatha along with honey(12gms)

GOKSHURA KWATHA: B.R 34/19

- · Seeds of gokshura and yavakshara
- · Process of drug making: decoction based formula
- The decoction of the seeds of gokshura(50ml) should be taken by adding yavakshara (2gms) which instantaneously cures dysuria caused by the obstruction of the urinary passage by lumps of stool(pressure from the colon).

BRIHATYADI KWATHA: B R SHULA/ 31, CHAKRADUTTA

- Brihati (both types)
- Gokshura
- Eranda
- Kusha
- Kasha
- Ikshuralika
- All ingredients in equal parts raise 25gms of their combined mix and decoct in water measuring 400ml till its original quantity is reduced to 1/4th strain the liquid.
- Uses: pittaja shola

PUNARNAVASHTAKA KWATHA:

- Punarnava
- Nimba
- Patola
- Sunthi
- · Tikta Amrita
- Darvi
- Abhaya
- All equal quantity raised 25gms of their coarsely powdered mix and decoct it along with water measuring 400ml till it is reduced to 1/8th.
- Uses: sarvanga shotha, udara roga, pleurisy, dyspnea, anemia.

PUNARNAVADI KWATHA:

- Root of punarnava
- Devadaru
- Haridra
- Katuki
- · Patola leaves
- Harada
- Bark of neem
- Nagamotha
- Dried ginger
- Guduchi
- Gomutra
- Purified guggulu
- Take equal parts of root P,D,H,K,Patola leaves, Harada, bark of neem, nagamotha,dried ginger, guduchi- Raise 25gms of their coarsely powdered mix and decoct it along with water measuring 400ml till it is reduced to 1/8th. Seiv the decoction.

- Method of use: gomutra- 24gms along with 500mg to 1gm purified guggulu drink kwatha daily.
- Uses: all types of shotha, git diseases, cough, swasa, shula, pandu.

HARITAKYADI KWATHA: B R UDARAROGA 36/YOGARATNAKARA

- Haritaki
- Nagara
- Devadaru
- Punarnava
- Cinnaruha
- All equal parts raise 25gm of their coarsely powdered mix and decoct it along with water measuring 400ml till it reduced to 1/8th.
- Consume the decoction with guggulu and gomutra.
- Therapeutic benefits: shotha, udara roga.

DASHAMOOLADI KWATHA: B.R

- Dashamoola.
- Devadaru
- Nagara
- Cinnaruha
- Punarnava
- Abhaya
- All equal quantity raise to 25gms of their coarsely powdered mix and decort along with water measuring 400ml till it reduced to 1/8th.
- Therapeutic benefits: jalodara, shotha, shleepada,galaganda,vataroga

GOKSHURA KWATHA: B R

- Gokshura beeja
- Yavakshara
- Gokshura kwatha 50ml + 2gms yavakshara
- Indn: Mutrakricchra

GOKSHURA KWATHA:

- Leaves, fruits, and roots of gokshura 25gms
- Water -400ml- reduced to 1/8th strain the liquid.
- Honey-12gms
- · Jiggery-6gms
- Indication: mutraghata

TRIKANTAKADYA GHRITA: BR

- Murchita goghrita 1litre
- Gokshura
- Eranda
- Panchamoola 570gms
- Water
- Karkaru seeds
- Water 4litres
- Boil down the preparation to 1/4th
- 1litre of kashaya obtained of each of gokshura, roots of eranda panchamula herbs
- Satavara juice 1litre
- Kalka of karkaru seeds decoct them in water measuring 4litres
- Reduce to 1/4th
- Kushhmanda juice 1litre
- · Ikshu rasa- 1litre
- Finaly cook all ingredients medicated ghrita obtained.
- Dosage: 12gms
- Indication: mutrakricchra, ashmari, mutraghata

TRIKANTAKADI KWATHA:

- Trikantaka
- Aragwadha
- Darbha

- Kasa
- Durlabha
- Pashanabheda
- Pathya
- Honey
- Indn: ashmari, mutrakricchra

DISCUSSION AND SUMMARY

- Understanding of CKD in Ayurveda is based on multitudes of etiologies and form a vast clinical spectrum of symptomatology.
- In Ayurveda, the disease has not been singly explained but references of its clinical features have been depicted in multiple disease presentations.
- Mutradosha is one such clinical entity which could encompass the diseases of the kidney.
- In ancient times since biometric evaluations were absent, clinical presentation were the red flags to diagnose anuktavyadhi.
- In present scenario there are a vast armamentarium of biochemical tests including blood, urine and clearance tests which are helpful in early identification, proper assessing of course, prognosis of the illness and response to treatment.
- In western medicine, the initial presentation also have been described with ambiguity and usually misdiagnosis is frequently encountered. Diagnosis of CKD in initial stages needs further clinical assessments and scientific documentation of signs and symptoms to arrive early diagnosis.
- In Vikaraprakruti, the clinical presentation of the patient can be Mutraoukasda i,e Anuria, Mutrakshaya i.e Oliguria, Shota i.e, Renal oedema, Asadhyapandu i.e, advanced stage of Anemia, Sannipatajachardi i.e, Uremic vomiting. Mutraoukasda occurs due to Avarana by pitta or kapha that can be co-related to Post infectious glomerulonephritis and Diabetic nephropathy respectively. Mutrakshaya occurs due to secondary illness like Systemic hypertension, SLE and Hyperuricemia, Amyloidosis, Pyelonephritis, Renal tuberculosis can be co-related with Shonitaabhishyanda, Asadhyavatarakta, Ama, Abhyantaravidradhi and Raktaja mutrakricchra.

• This kind of clinical differentiation could help in different levels of understanding the disease i.e clinical symptoms, etiopathogenesis and diagnosis. Such tier system reduces the chances of misdiagnosis by an efficient physician.

____***____

CHAPTER 8

Understanding of Chronic Kidney Disease Through Ayurveda and its Experience/Evidence Based Management

Dr. Manish V. Patel

Professor & Head, Post-graduate Department of Kayachikitsa, J. S. Ayurveda College, Nadiad (Gujarat)

INTRODUCTION

Chronic Kidney Disease (CKD) is a progressive condition characterized by the gradual loss of kidney function over months or years, ultimately leading to end-stage renal disease (ESRD). CKD affects approximately 10% of the global population, with millions dying annually due to a lack of affordable treatment options [1]. Worldwide rank of CRF as a cause of death in 1990 was 27th which became 12th in 2017. The global all-age CKD mortality rate had increased by 41.5% since 1990 [2]. Over 2 million people worldwide currently receive renal replacement therapy to stay alive, yet this number may only represent 10% of people who actually need treatment to live [3]. The number of patients who are on hemodialysis to alive will be reached double as 5.24 million in 2030 from 2.62 million in 2010 [4]. CKD involves initial kidney damage, which can be minor at the start. Compensatory hypertrophy of surviving nephrons occurs, leading to an increased workload on these nephrons. Over time, this results in further damage and progressive dysfunction, eventually leading to ESRD. CKD affects the kidneys' excretory, metabolic, and endocrine functions.

AETIOLOGY:

- Diabetes mellitus
- Polycystic kidneys
- Hypertension
- Analgesics/other medicines

- Glomerulo-nephritis
- Auto-immune
- Interstitial nephritis
- Non-specific

Risk factors: [5-16]

- Low socio-economic status
- Lifestyle behaviour & diet
- Recurrent dehydration.

- Pattern (insecurity of food)
- Heat stress
- Stress & Phobia

UNDERSTANDING OF CKD ACCORDING TO AYURVEDA

CKD cannot be directly correlated to any nomenclated ayurveda clinical entities mentioned in classical text book. Hence, unfortunately, Ayurveda scholars don't have Ayurveda nidana pancaka or samprapti of CKD. Hence, it is difficult to manage the disease through Ayurveda. However, according to Caraka samhita, sutrasthana chapter number 18, verse 44 to 46, any non-nomenclated clinical entities can be treated by using the common fundaments of Ayurveda management which depended on –

Analysis of -

- 1 Nidana
- 2. Dosa
- 3. Dusya and
- 4. Site of vitiated dosa srotas, srotodusti and other samprapti ghataka

One cross-sectional observational research on determination of nidana-pancaka through classical Ayurveda approach has been carried out in P D Patel Ayurveda hospital affiliated to J S Ayurved Mahavidyalaya, Nadiad in 2022-23. It was completed by Maitriben M Patel, 4th year BAMS student under the guidance of Kayachikitsa department and sponsored under the studentship (SPARK programme) of CCRAS. Final report submitted to CCRAS, New Delhi, in June 2023.

All above factors were identified in the patients of CKD during above mentioned observational study and can also be helpful to understand the CKD through Ayurveda properly. They described below.

1. Nidana:

- Vegadharana especially apana vega
- Certain mutravaha srotas & medodusti vikara asmari, mutrakrechra, prameha and sthaulya
- Visamasana

- Bijadosa
- Balabhramsa Amadosa
- Daiva

Risk factors:

- *Mamsahara* (non-vegetarian food items)
- Vrdhdhavastha (older age)
- Cirakalina malabaddha (chronic constipation)
- Autsukya, bhaya & cinta (Anxiety, fear and excessive thinking)
- Atilavana and amla sevana
- *Udavarta* history
- Nidraviparyaya
- Bharadhva (Excessive physical work beyond the capacity)
- **2. Dosa:** All the *dosa* are involved in this disease. However, as per the conventional aetiology, initially, any one or more *dosa* get involved as *sannikrsta nidana* and start the *samprapti*.
 - Kapha is responsible for blockage of micro channels specially in the patients of CKD who have diabetes mellitus as a conventional aetiology.
 - Pitta is responsible for inflammatory processes and necrosis. This is in the patients of CKD due to chronic nephritis or Ig A nephropathy or nephrotic or nephritic syndrome.
 - *Vata is responsible for degeneration of the structure of the kidney.* This is initially in the patients of hypertensive nephropathy.

However, at the end of any of the above initial processes, *vata* involved and ultimately provocation of *vata dosa* degenerates the parenchyma of kidneys by its *laghu*, *khara*, *parusa* and *visada amsamsa*.

3. Dusya:

Mutra, rasa, udaka, sveda, rakta, sira are the basic dusya later all dhatu and upadhatus may get involved.

One can understand it as mentioned below.

Fluid and electrolyte imbalance, reduced immunity and cardiovascular complications in the patients of CKD suggests rasa as well as udaka dusti.

Anaemia and bleeding tendencies - rasa-rakta dusti

Myopathy, muscles weakness, catabolism of muscles - mamsa dusti

Dyslipidaemia / hyperlipidemia - medas dusti

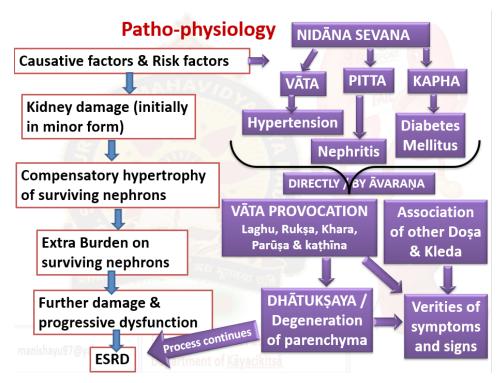
Renal Osteodystrophy - Asthi dusti

Neuropathy - Majja and snayu dusti

loss of libido and sexual function - Sukra dusti

- **4. Srotas:** Initial involvement of *Mutravaha*, *udakavaha*, *svedavaha*, and *rasavaha srotas* but as disease advances multi-srotas (multi-system) involvement is there. This leads the disease incurable.
- 5. Srotodusti laksana Sanga and Vimargagamana
- 6. Agni: generally, agni is manda at every level.
- 7. Ama: According to Ayurveda, *mutra* is one of the *trimala* (waste products quite similar to stool, urine and sweat). According to *astangahrdaya*, elimination of *kleda* (watery substance/ fluid) is a function of *mutra* which suggest that *mutra* and *kleda* are different substances. So, solutes in the urine can be considered as *mutra*. Hence, creatinine, urea and other ammonia products, excess of electrolytes, uric acid etc. can be considered as a *mutra*. These all accumulate in the body fluid in the patients of CKD. Through this way we can understand that *malasamcaya rupa ama* is present as a main pathological factor in the patients of CKD.
- 8. Udbhavasthana: Pakvasaya
- 9. Rogamarga: Initially madhyama marga but latter all three marga, which increase its incurability.

10. Overall Samprapti:



TREATMENT PROTOCOL

Used in P D Patel Ayurveda Hospital since many years with satisfactory results

- 1. Nidana parivarjana
- 2. Repair of Vyadhi adhisthana
- 3. Mala nirharana (Supporting excretory functions)
- 4. Dhatu-Posana by rasayana

Treatment

A. Nidana parivarjana: Avoid causative factors

1. Pathya:

- Items of rice or rice flour, pop rice, and mungbeans
- · Vegetables- light to digest without slimy properties
- Fruits sweet apple and papaya, dates
- Limited amount of saindhava lavana

- Patients of stage I can take 1-2 chapati of barley flour
- Sesame oil and cow ghee (not for deep frying)
- Cyavanaprasavaleha / Brahma rasayana about 20 gms with up to 250 ml boiled cow milk.

2. Apathya:

- All other flour items (i.e. wheat, millet, corn)
- · Bakery items
- All oils except sesame
- Junk food
- · Fermented items
- Salts
- Items with sour taste
- Chilies
- · Deep fried items
- · Milk products
- Excessive physical and mental stress
- Day sleep and night vigil

SODHANA

✓ Niruha Basti Every day before lunch.

Prepared with madhu 30 ml + saindhava lavana 5 g + tila taila 30 ml + kalka dravya (*satapuspa*, madanaphala, *pippali*, *vaca* in *curna form*) 15 g + *Punarnavadi kvatha- 240 ml*

Establishing Sroto-Prakrti mainly of Mutra-udaka- svedovaha by

- Supporting excretory functions

shamana

- ✓ Lekhana and *Mutrvaha* srotas rasayana
- ✓ Varunadikvatha 40ml twice a day (varuna tvak + bilva mula + apamarga + citraka mula + agnimantha + sigru + brhati + kiratatikta + karanja + satavari

- ✓ Goksuradi guggulu 1gm thrice a day with warm water (containing goksura + guggulu + triphala + trikatu + musta)
- ✓ Rasayana *curna* 3gms three times a day with water (powder of *goksura* + amalaki + guduci)
- ✓ Bhumyamalaki curna 3gms three times a day with water

For the patients of CKD whose CMD is maintain and/or serum creatinine level is less than 3.0 mg/dl,

electrolytes within normal limits, no swelling -

- 1. Snehapana with goksuradi ghrta
- 2. After samyak snehapana, abhyanga & svedana for next three days
- 3. On the 3rd day virecana karma
- 4. Samsarjana krama for next 3 days
- 5. All the medicaments and *niruha* basti every day continue as mentioned above

Avasthiki & laksanika cikitsa:

- 1. Nausea/vomiting-chardiripu *curna* 1 gm 2 to 3 times.
- 2. Hyperacidity syndrome shankha bhasma 300 mg 3 times
- 3. Low urine output/ excessive swelling/fluid accumulation-punarnava 3 gm 2 times. If require, *yavaksara* 300 mg 2 times.
- 4. Muscular cramps/weakness/body ache-sindhuttha lavana (magnesium sulfate) 200 mg 2 to 3 times in a day.
- 5. Anemia (Hb level 8 to 10 gm%) dhatri lauha 1 gm 2 to 3 times a day. In severe anemia (Hb level < 7 gm%) Blood transfusion.
- 6. Low serum calcium / high serum phosphate level *asthishrnkhala* ghrta 20 ml 2 times
- 7. Hyperkalemia Restriction of fruits, remove water from vegetables after boiling, Niruha basti
- 8. Hypokalemia *sindhuttha lavana* (magnesium sulfate 250 mg twice oral), coconut water, fruits, *sarjikaksara /yavaksara* 250 mg three times
- 9. Hypernatremia sindhuttha lavana, punarnava

RESULTS OF ABOVE-MENTIONED AYURVEDA TREATMENT OBSERVED IN PATIENTS OF CKD:

- **A. Flow of CKD patients:** We have experience of treating the CKD patients since more than two decades. Every year 4000 to 4500 patients of CKD attend the OPD of our hospital, among which 350 to 500 new patients hospitalized every year. Hence, we have vast experience to see the patients of CKD in varieties and also to treat them through Ayurveda management.
- **B. Publications:** In relation with above-mentioned treatment protocol, more than 10 research articles were published in various peer-reviewed journal. Some of them are mentioned below.
 - 1. Patel Manish, Kacchia Nimesh. Effects of Ayurvedic treatment on 100 cases of chronic renal failure (other than diabetic nephropathy). 'AYU' 2011; 32(4):483-486.
 - 2. Patel Manish, Gohil Unnati. Polyherbal treatment in chronic kidney disease A case study; UJP 2013; 2(4):44-47. Available on www.ujponline.com
 - 3. Patel Manish, Shah Namrata, Gupta S. N. Ayurvedic management of primary nephrotic syndrome. Journal of Research and Education in Indian Medicine, 2015. http://dx.doi.org/10.5455/JREIM.82-1422092361
 - 4. Patel Manish, Vyas Jatin. Ayurvedic management of Chronic Renal Failure

 A case report. IJAAR 2017; 3(2):458-461.
 - 5. Patel Manish, Patel Snehal. A case study of Chronic Renal failure successfully managed with Ayurvedic treatment. J of Ayurveda and Hol Med (JAHM), 2017; 5(3):48-53
 - 6. Patel Kalapi, Gupta S. N. Effect of Ayurvedic management in 130 patients of diabetic nephropathy 'AYU' 2011; 32(1): 55–58.
 - 7. Patel Manish, Patel Mansi, Patel Kalapi, Gupta S. N. An uncontrolled open labeled pre and post designed interventional clinical study to evaluate the effect of Ayurvedic treatment on deceleration of disease progress in non-dialysis stage IV-V patients of *chronic renal failure*. Conference Abstract published in Journal of Ayurveda and Integrative Medicine, 9(2), Supplement 1, April–June 2018, Pages s2-s3. Available at https://doi.org/10.1016/j.jaim.2018.02.011
 - 8. Patel Manish, Patel Mansi, Patel Kalapi, Kessler C., Stepelfield Elmar, Wischnewsky M., Gupta S. N. Deceleration of Disease Progress Through

Ayurvedic Treatment in Nondialysis Stages IV-V Patients With Chronic Renal Failure: A Quasi-Experimental Clinical Pilot Study With One Group Pre- And Post design and Two Premeasurements. *J Altern Complement Med.* May 2020; 26(5):384-391. https://doi.org/10.1089/acm.2019.0419

C. Some scientists suggest us to make a RCT on the effect of this treatment in the management of CKD. However, it is not possible for us to randomize the patients of CKD in ayurveda treatment group and in other than ayurveda group (either placebo or standard treatment) because they visit our hospital with willingness of Ayurveda treatment. Most of them are already taking the conventional medicaments and now want to take Ayurveda treatment for betterment.

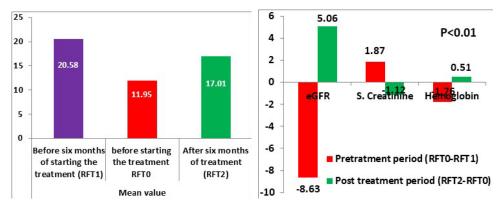
Our team has found different solution on it. We have made a different design of study which was a single group quasi-experimental study with pre- and post-design and two pre-measurements.

Here are the key points and explanations of publications no. 7 and 8.

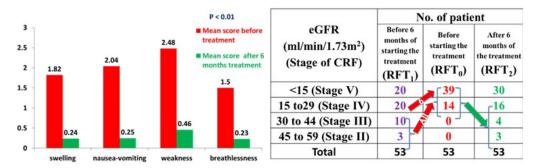
It discusses changes in chronic renal failure (CRF) progression through a comparison of the decline in eGFR and increment in serum creatinine and blood urea level in the six months before starting Ayurveda treatment with their improvement after administration of six months of Ayurvedic treatment.

Timeframes:

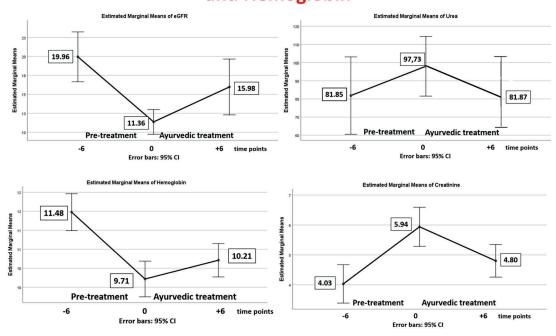
- RFT0: eGFR at the start of treatment
- RFT1: eGFR six months before the date of visitation of Ayurveda hospital (6 months before the timeframe of RFT0).
- RFT2: eGFR after six months of Ayurveda treatment.



Comparison between differences in mean values of pre-(RFT0-RFT1) and Post Ayurveda treatment (RFT2 -RFT0) periods



Effect of ayurveda treatment on Renal Function Tests and Hemoglobin



OBSERVATIONS DURING PRACTICE

 Prognosis is observed more and more poor in following chronology. Kidney size normal CMD preserved, S. creatinine <3.0mg/100ml Kidney size reduced CMD preserved, S.creatinine <3.0mg/100ml Kidney size normal CMD preserved, S.creatinine > 3.0mg/100ml Kidney size reduced CMD altered, S. creatinine < 7.0mg/100ml Kidney size reduced CMD lost, S. creatinine >7.0mg/100ml

- 2. Patients with diabetic nephropathy are treated most successfully
- 3. Patients with autoimmune etiology have least response.
- 4. Observations related to some herbal medicine oral administration of asvagandha, jatamansi and yastimadhu are found harmful in many patients of CKD.
- 5. Rasausadhi deteriorates eGFR-specially parada & dhatu bhasma (however *mandura* bhasma didn't).
- 6. *Dalvavyapasraya* cikitsa-good role, mandatory as doiva is one of the main c
- 7. *Satvavajaya* cikitsa mental positivity is found as enhancer of medicine effect
- 8. Integrative approach
 - Conventional medicine especially anti- hypertensive and/or antidiabetic-instructed to continue initially and its dose reduced as per the requirement (response of Ayurvedic treatment?)
 - Require in majority of the 3(b), 4th and 5th stage of CKD patients
 - Less requirement found in 1st and 2nd stage of CKD patients.
- 9. Ayurvedic treatment can reduce the need of dialysis and hence postpones or reduce the frequency of it if patient is already on dialysis
- 10. It can postpone renal transplant and adds some more months or years of post-transplant life. Ayurvedic treatment is effectively useful to treat or reduce the complications of chronic renal failure and hence improve the quality of life.

REFERENCES

- Kidney Day: Chronic Kidney Disease. 2015; http://www.worldkidneyday.org/faqs/chronic-kidneydisease/
- 2. Lancet 2020; 395: 709–33 Published Online February 13, 2020. https://doi.org/10.1016/S0140-6736(20)30045-3
- 3. Couser WG, Remuzzi G, Mendis S, Tonelli M. The contribution of chronic kidney disease to the global burden of major non-communicable diseases. *Kidney Int.* Dec 2011;80(12):1258-1270.
- 4. Liyanage T, Ninomiya T, Jha V, Neal B, Patrice HM, Okpechi I, et al. Worldwide access to treatment for end-stage kidney disease: a systematic review. Lancet. 2015 May 16;385(9981):1975–82. http://dx.doi.org/10.1016/S0140-6736(14)61601-9
- 5. Hemodial Int. 2016 Jan;20(1):78-83
- 6. N Engl J Med. 2013 Dec;369(23):2183-96

- 7. J Am Soc Nephrol. 2016 Mar;27(3):887-93
- 8. Blood Purif. 2016;41(1-3):117-22
- 9. BMC Nephrol. 2014 Dec;15(1):194
- 10. J Ren Nutr. 2015 Mar;25(2):103-10
- 11. Am J Prev Med. 2015 Dec;49(6):912-20
- 12. Am J Nephrol. 2014;39(1):27-35
- 13. Am J Kidney Dis. 2017 Jul;70(1):38-47
- 14. Eur J Clin Nutr. 2005 Sep;59(9):1049-58
- 15. Proc Nutr Soc. 2011 Feb;70(1):82-91

CHAPTER 9

Understanding Cardiac Disorders: An Ayurveda Perspective

Prof. R.K. Yadava

Department of Kayachikitsa, All India Institute of Ayurveda, New Delhi

ABSTRACT

Cardiovascular disease, also known as heart disease, refers to the following 4 entities: coronary artery disease (CAD) which is also referred to as coronary heart disease (CHD), cerebrovascular disease, peripheral artery disease (PAD), and aortic atherosclerosis. Cardiovascular diseases (CVD) remain among the 2 leading causes of death in the United States since 1975 with 633,842 deaths or 1 in every 4 deaths, heart disease occupied the leading cause of death in 2015 followed by 595,930 deaths related to cancer. CVD is also the number 1 cause of death globally with an estimated 17.7 million deaths in 2015, according to the World Health Organization (WHO). Ayurvedic Acharyas described several drugs from different groups like Hridya (Cardiotonics), Lekhana (Hypolipedemic), Deepana, Amapachana (Bitter tonics & Digestives) and Rasayana (Antioxidants) which are effective in the management and prevention of cardiac disease

INTRODUCTION

Cardiovascular disease, also known as heart disease, refers to the following 4 entities: coronary artery disease (CAD) which is also referred to as coronary heart disease (CHD), cerebrovascular disease, peripheral artery disease (PAD), and aortic atherosclerosis. [1] Physical inactivity, intake of a high-calorie diet, saturated fats, and sugars are associated with the development of atherosclerosis and other metabolic disturbances like metabolic syndrome, diabetes mellitus, and hypertension that are highly prevalent in people with CVD [2] According to the INTERHEART study that included subjects from 52 countries, including high,

middle, and low-income countries, 9 modifiable risks factors accounted for 90% of the risk of having a first MI: smoking, dyslipidemia, hypertension, diabetes, abdominal obesity, psychosocial factors, consumption of fruits and vegetables, regular alcohol consumption, and physical inactivity. Cardiovascular diseases (CVD) remain among the 2 leading causes of death in the United States since 1975 with 633,842 deaths or 1 in every 4 deaths, heart disease occupied the leading cause of death in 2015 followed by 595,930 deaths related to cancer. ^[2] CVD is also the number 1 cause of death globally with an estimated 17.7 million deaths in 2015, according to the World Health Organization (WHO). Atherosclerosis is the pathogenic process in the arteries and the aorta that can potentially cause disease as a consequence of decreased or absent blood flow from stenosis of the blood vessels. A thorough physical examination is paramount for the diagnosis of CVD. It is starting with a general inspection to look for signs of distress as in patients with angina or with decompensated heart failure, or chronic skin changes from PAD.

The term 'Hridroga' is described in the Ayurvedic texts but it seems that many cardiac diseases have been included in the description of Shwasa roga and Shotha roga. The name itself indicates the function of this vital organ. 'Hru' means, one which draws fluid or blood from the body forcibly [3] and 'Da' which means to donate. Simply saying, Rasa (body fluids) and Rakta (blood) are circulated in the body, by the dual action of forcible collection and supply by the heart and thus the name Hrudaya in Ayurveda. [4] "Ama" (similar to toxic complexes, hyperlipidaemia, etc.) is a significant risk factor in the aetiology of heart disease by producing Srotosanga and Dhamnipratichya, which are substantial pathogenic factors for the development of cardiac disorders such as coronary artery disease or ischaemic heart disease.

MATERIALS AND METHODS

The research comprised MEDLINE, PubMed, The Cochrane Library, Google Scholar, Ayush research portal, and the D.H.A.R.A. database. The main search terms were combinations of Hrudroga, coronary artery disease and Gulma in various databases. Moreover, the main goal is to gain documents matching most keywords. A full-text read of potential documents that met the eligibility criteria was conducted.

Inclusion and Exclusion Criteria

Studies were included if they met all the following criteria:

- 1) The review articles and experiments were based on the Hrudroga patients.
- 2) Only details from UGC-approved journals.
- 3) the language is limited to English

The exclusion criteria of this study were as follows:

1) irrelevant or duplicate publications

Basic understanding of heart vis-a-vis "Hridaya"

- Heart is made up of specialized tissue called myocardium.
- With four chamber and valves in between them, working in rhythmic manner continuously. (for 4 month of IUL-Last breath)
- Myocardium can be correlated with Mamsa Dhatu.
- Rhythmic contractions can be due to Vayu- Prana and Vyana vayu.
- Also, Hridaya is Sthana of Sadhak pitta, Avalambak kapha, and Oja and Mana

Physiology of Hridaya according to Classics

Samana vayu brings Ahara to Hridaya



Vyana vayu circulates it to all over the body and bring back.



Prana vayu brings Ambarpiyusha means oxygen inside the body by every inspiration.



Udana vayu gives Bala, energy to cardiac muscle.



Sadhaka pitta is responsible for the normal functioning of Buddhi, Medha and Pranagni.



Kapha helps in Dharana and Avalambana, holding, lubricating and shock absorbing properties.

Aetiology of Hridroga^[5]

General

Dietary Factors – Excess & frequent consumption of substances having Ushna, Tikshna (Spicy), Guru (Heavy diets), Ruksha (dry), and Kashaya (Astringent) properties.

Life style related factors

- Excessive/strenuous physical exercise or activity (Vyayama)
- Excessive purgation, emesis or enema (Basti)
- Suppression of natural urges like Chinta, Bhaya, Krodha etc. factors related to emotional & mental stress
- Abhighata (Physical and mental trauma)
- Adhyashana (Overeating), Vishmashana (Irregular dietary habits)

Samprapti^[6,7]

Nidana Sewana ➡ Tridosha Prakopa ➡ Ras Dhushti ➡ Hrid Roga

Vata, Pita And Kapha Vitiated By Respective Causes, vitiates Rasa and along with its circulation reach Hridaya and get lodged in it producing different Kinds Of derangement in its function, thus causes Hrid Roga.

Nidana-High calorie and saturated lipid-rich diet + Sedentary lifestyle →



Mandagni (low digestive power) - Rasa dushti-Sama Rasa



+ kapha-Pitta + Rakta + Meda (Hyperlipidaemia)



Dhamani Pratichaya (Arterosclerosis)



Strotorodha (obstruction of arteries- Artherosclerosis) + Vayu - Uro Ruja (chest pain)/ Hrid shoola / Hrid roga.

Samprapti ghataka

- · Dosha-Tridosha
- Dushya- Rasa, Rakta

- Agni-Jathragni, Dhatwagni, Bhutagni
- Agni Dushti-Mandagni
- Ama-Jatragni Janya Ama
- Srotas-Rasavaha, Pranavaha
- Srotodushti-Sanga, Vimargamana Udhbhava
- VyaktasthanaSthana-Hridya
- Svabhava-Ashukari Rogmarga-Madhyama

Samanya nidana	Corelated causes	conditions
Vyayama(ch)	Increased physical activity, training, higher level of cardiopulmonary fitness	Arterial fibrillation CADMalignant ventricular arrhythmia
Atitikshna Dravya sevana	Cigarette smoking increases alcohol	Atherosclerosis MI
Ativirikta(cha)	Dehydration/volume loss	Vasoconstriction thereby cardiac arrest
Chinta(ch.MN,B.P.)	Stress from internal/external	HTN
Bhaya(ch)	Environmental-stimulates Baroreceptors-	
Trasa(ch)	increasedSympathetic and decreased parasympathetic nerve impulse	
Srama(ch)	Chronic over-exertion- can lead to cardiovascular events like strokes, heart attacks and even heart failure.	
Vega dharana (su, MN)	Suppression of natural urges	
Abhighata(MN)	Trauma caused by unexpected collapse resulting from heart disease	

Lakshana of Hridroga v/s CV diseases Lakshana of hridaroga

- Vaivarnya
- Murcha
- Swasa
- Aasya Vairasya/Aruchi
- Chardi
- Pramoha
- Urashoola

Indicators of CV diseases

- Cyanosis
- Syncope
- Anorexia
- Vomiting Stupor
- Chest pain

Types of hridroga^[6,7]

Vataja hridroga

Symptoms

- Different types of pain
- Intolerance to loud noise
- Tremors
- Dyspnoea
- Restlessness
- Confusion
- insomnia

Paittika hridroga

Symptoms

- Chardi
- Trishn
- Mohsa
- Klama
- Jwara
- Dhumayana

Kaphaja Hridroga

- Heaviness
- Anorexia
- Nausea

- Excessive salivation
- Indigestion

Krimija hridroga

Symptoms

- Hrillasa
- Kandu

Ayurveda says that "Hridayad krimi-a special type of parasites also cause heart disease.



The patients suffering from sannipataj hridroga, if take Idedajanya sahara Le. Til, Gud means jiggery, milk.



Kledajanya Rasadushti leads to granthi uttpati in which krimi arises.



And advised to treat as emergency otherwise it leads to death.



Symptoms of krimij hridroga are "suchivat tudyate" means stabbing, cutting severe chest pain, itching, nausea, chest discomfort.



These krimi go into hridava with ras dhatu and make erosions and granthi on in dhamanies of hridaya.



All these symptoms are suggestive of, thrombo embolic event of coronary artery leading to acute MLL



"CHAGAS' disease is by far most important parasitic infection of heart In America caused by "Trypanosoma cruzi protozoa.



Heart and lungs are the thoracic organ mod frequently affected by parasites.

MANAGEMENT^[6,7]

The verse describes the virtue of healthy lifestyle in prevention of infirmity and ill health. Who combine a balanced diet, regular physical activity, balanced in thoughts & action are always free from sickness

- Nidana Parivarjaa
- Hridya Ahara & Aushada
- Shodhana
- Rasayana
- Yoga "An ounce of prevention is worth a pound of cure"

Vataja Hrid Roga Chikitsa:

Principles of treatment - Snehana and Vamana - Snehana (oleation, giving medicated ghee and or oil to drink in metered doses) followed by Vamana (therapeutic emesis) is the main strategy of treating Vataja Hrid Roga.

After Snehana, emesis should be given by administering Dashamula Kwatha (Dwipanchamula Kwatha) i.e. decoction of Dashamula (10 roots) or Sa sneha lavana (medicated ghee mixed with rock salt).

Classical formulations

Pippalyadi Churna - is a good formulation which relieves Vataja Hrid Roga. This powder is made up by mixing together the powders or -

Pippali Long

pepper Ela

Cardamom

Vacha Acorus

calamus Hingu

Asafetida

Yava Kshara - Alkali prepared by burning the whole plant of

Barley Saindhava Lavana - Rock Salt

Sauvarchala Lavana - Sauchal

salt Shunti - Dry Ginger

Deepya (Yavani) - Trachyspermum ammi

The resultant powder prepared from these herbs is called Pippalyadi Choorna. This should be served mixed with any one of the Phala rasa (fruit juice), Dhanyamla (sour fermented drink), Kulatta Rasa or Kwatha (Juice or decoction of horse gram), Dadhi (curds), Madhya (medicated alcohol) or Asava (herbal fermented drink). This should be administered Vamana (therapeutic emesis)

Pushkaramooladhya Churnam - is yet another useful formulation for Vataja Hrid Roga.

Pittaja HrudRoga Chikitsa:

Principles of treatment

Vamana - Vamana (therapeutic emesis) should be adminised with mixture of Shreeparni or Gambhari (Gmelina arborea), Madhuka (Indian licorice), Madhu (honey), Sita (sugar), Guda (jaggery) and Jala (water). This subsides the Pittaja Hrid Roga.

Sheeta Kwatha Sinchana - Patients of Pittaja Hrid Roga should be sprinkled with Sheetala Kwatha (cold decoction) prepared using Madhura Dravyas (medicines or herbs having sweet taste)

Sheeta Pradeha - The patient should be anointed or applied with pastes prepared from herbs having cold potency

Virechana Therapeutic purgation should be administered to remove morbid pitta. The medicine (laxative) should be prepared by rubbing or grinding Draksha (raisins), Madhu (honey) and Parushaka (Grewia asiatica) with water

Virechana - Therapeutic purgation should be administered to remove morbid pitta. The medicine (laxative) should be prepared by rubbing or grinding Draksha (raisins), Sharkara (sugar), Madhu (honey) and Parushaka (Grewia asiatica) with water

Pitta Nashaka Anna-Pana - After the person is cleansed after administration of Vamana and Virechana, foods and drinks prepared with pitta alleviating herbs should be served

Classical Formulations -

Drakshadi Choorna Equal quantities of Draksha (raisins) and Haritaki (Terminalia chebula) mixed with equal quantity (equal to sum of draksha and haritaki) of Sharkara (sugar) should be administered mixed in sheeta jala (cold water)

Arjunadi Churna / Arjuna Ksheerapaka - Paste of bark of Arjuna (Terminalia arjuna) should be mixed in 4 times the quantity of milk and water, 4 times

the quantity of milk ilk: Water = 1:4:16). The ingredients should be heated on mild flame

Kaphaja Hrid Roga Treatment

Principles of treatment - Swedana - Fomentation (sudation, sweating treatment, steaming) should be given (followed by Snehana)

Vamana - Therapeutic emesis should be administered after Swedana Langhana - Lightening treatments, especially fasting should be administered

Kapha Nashaka Aushadha - Medicines which are antagonistic to Kapha should be administered after having accessed the strength of the doshas

Classical formulations

Trivrutadi Churnam - Powder of Trivrit (Operculina turpethum), Shati (Hedychium spicatium), Bala (Sida cordifolia), Rasna (Pluchea lanceolata, Alpinia galanga), Shunti (Ginger), Pathya

(Terminalia chebula) and Pushkaramula (Inula racemosa) should be taken mixed in Gomutra (urine of cow). Similarly the kwath or decoction of the same.

Tridoshaja Hrid Roga Treatment

Principles of treatment -Langhana - Firstly langhana or lightening therapies, mainly fasting or light food should be administered in Hrid Roga caused by aggravation of all the 3 doshas.

Tridosha hara anna - Later, foods which alleviate tridoshas should be administered Tridosha hara aushadha - Medicines which are antagonistic to the Tridoshas should be given

i.e. Tridosha alleviating churnas, ghritas etc

Krimija Hrid Roga Treatment

Principles of treatment: Langhana or lightening therapies should be initially done

Apatarpana - Following langhana, the patient should be kept on starvation or food which doesn't provide nourishment to the tissues

Krimi hara karma - All the treatments and medicines which destroy krimi as explained in Krimi Roga Chikitsa should be done

Classical formulations -

Vidangadi Choorna - Powder of Vidanga (Embelia ribes) and Kushta (Saussurea lappa) should be given mixed in Gomutra (cow's urine)

Basti karma

vataja hridrogas

Anuvasana Basti - Tailas with Bhadradaruadi Gana pitttaja hridroga Taila processed with Yatimadhu (Glycyrrhiza glabra) + Honey kaphaja hridroga Anuvasana Basti with Bala Taila

Nasya karma

Navana Nasya

- Bilva (Aegle marmelos)
- Rasna (Pluchea lanceolata),
- Yava (Hordeum vulgare)
- Badara (Ziziphus mauritiana)
- Devdaru (Cedrus deodara)
- Punnarnava (Boerhavia diffusa)
- Kulatha (Dolichos biflorus)
- Laghu Panchamoola can be used after Vamana

Prevention of hridaya roga

- 1. Avoid of Manasa hetu/Stress factors
- 2. Diet & lifestyle modification
- 3. Rasayana therapy (Rejuvenative Measures) for Hridroga-Brahm Rasayana, Amalaki Rasayana, Shilajeet Rasaya-na, Agastaya Haritaki, Chayavanprasha Rasayana.

Yoga

Promote balance in the Circulatory/Neuro-endocrine system

Ekamulika

 Amalaki is ideal to pacify pitta, since it is an excellent antioxidant and has been shown to lower cholesterol and reverse arterial plaque formation.

- Protective Effect of Boerhaavia diffusa L. against Mitochondrial Dysfunction in Angiotensin II Induced Hypertrophy in H9c2 Cardiomyoblast Cells
- Punarnava (Boerrhaavia diffusa) is al is the best choice to pacify kapha and eliminate retained fluid in mild heart failure. It is also an important heart tonic
- Efficacy of the monocarbonyl curcumin analogue C66 in the reduction of diabetes- associated cardiovascular and kidney complications
- Neem and Turmeric (Curcuma longa) will both lower blood glucose and reverse the prothrombotic state.
- Ashwagandha May Reduce Stress-induced Cardiovascular Changes in Healthy Males. More Study Is Needed
 - 18-Glycyrrhetinic Acid Improves Cardiac Diastolic Function by Attenuating Intracellular Calcium Overload
 - Ashwagandha "can ameliorate the negative change in cardiovascular parameters associated with mental stress."
 - beneficial effect on arterial function by reducing aortic stiffness, wave reflections, and aortic pulse pressure.
- Effect of Piper longum Linn on histopathological and biochemical changes in isoproterenol-induced myocardial infarction in rats.
- Pippali (piper longum) is Anti-inflammatory; immunomodulatory, and Coronary vasodilator.

DISCUSSION

In Ayurveda, Hridroga can be considered as the nearest disease entity that can be directly equated to CAD. Moreover, different scholars have different opinions about the nearest possible disease. The kind of life that people lead nowadays has increased the frequency of heart problems in society. Cardiovascular disease development is primarily influenced by three risk factors: hyperlipidaemia, obesity, and diabetes mellitus. Heart disease can be effectively prevented by following the Ayurvedic principles of nutrition, lifestyle patterns (Ahara-Vihara, dincharya, Ritucharya), and codes of behaviour (Achara Rasayana). Ayurvedic Acharyas described several drugs from different groups like Hridya (Cardiotonics), Lekhana (Hypolipedemic), Deepana, Amapachana (Bitter tonics & Digestives) and Rasayana (Antioxidants) which are effective in the management and prevention of cardiac disease and also Yoga has shown promise as a

useful lifestyle intervention that can be incorporated into cardiovascular disease management algorithms.

CONCLUSION

Heart disease can be effectively prevented by following the Ayurvedic principles of nutrition, lifestyle patterns (Ahara-Vihara, dincharya, Ritucharya), and codes of behaviour (Achara Rasayana). The drugs ,exercise and yoga therapy are being effectively used by Ayurveda physicians for a long time are now being proved to be effective for the management and prevention of CAD.

REFERENCES

- 1. Benjamin EJ, Virani SS, Callaway CW, Chamberlain AM, Chang AR, Cheng S, Chiuve SE, Cushman M, Delling FN, Deo R, de Ferranti SD, Ferguson JF, Fornage M, Gillespie C, Isasi CR, Jiménez MC, Jordan LC, Judd SE, Lackland D, Lichtman JH, Lisabeth L, Liu S, Longenecker CT, Lutsey PL, Mackey JS, Matchar DB, Matsushita K, Mussolino ME, Nasir K, O'Flaherty M, Palaniappan LP, Pandey A, Pandey DK, Reeves MJ, Ritchey MD, Rodriguez CJ, Roth GA, Rosamond WD, Sampson UKA, Satou GM, Shah SH, Spartano NL, Tirschwell DL, Tsao CW, Voeks JH, Willey JZ, Wilkins JT, Wu JH, Alger HM, Wong SS, Muntner P., American Heart Association Council on Epidemiology and Prevention Statistics Committee and Stroke Statistics Subcommittee. Heart Disease and Stroke Statistics-2018 Update: A Report From the American Heart Association. Circulation. 2018 Mar 20;137(12):e67-e492.
- US Preventive Services Task Force. Curry SJ, Krist AH, Owens DK, Barry MJ, Caughey AB, Davidson KW, Doubeni CA, Epling JW, Kemper AR, Kubik M, Landefeld CS, Mangione CM, Silverstein M, Simon MA, Tseng CW, Wong JB. Risk Assessment for Cardiovascular Disease With Nontraditional Risk Factors: US Preventive Services Task Force Recommendation Statement. JAMA. 2018 Jul 17;320(3):272-280.
- 3. Athavale V.B. 1st ed. Chaukhamba Sanskrit Pratishthan; 1999. Cardiology in ayurveda.
- 4. Mithra MP. Ayurvedic approach to treat Hridroga (valvular heart disease): A case report. J Ayurveda Integr Med. 2020 Jan-Mar;11(1):78-81. doi: 10.1016/j.jaim.2018.08.002. Epub 2019 Feb 26. PMID: 30824173; PMCID: PMC7125376.
- 5. Amgad N.et al, Coronary artery diameter as risk factor for Acute Coronary Syndromes in Asian Indians, American J of Cardiology, Vol. 96(6), pp-15, 2005.
- 6. Sushruta Samhita, Uttar sthana, Gulma pratishedh Adhyaya, 42/5, pp530
- 7. Agnivesha, Charaka, Dridhabala, Charaka Samhita, Chikitsa Sthan, Trimarmiya Adhyay 26/96-100

CHAPTER 10

Vata Vyadhi and its Management

Dr. Shraddha Sharma

Assistant Professor, PG Department of Kayachikitsa, Pt KLS Govt Ayurved College and Institute, Bhopal, Madhya Pradesh.

INTRODUCTION

Vata Vyadhi is a group of diseases caused by vitiated Vata Dosha. Vata Dosha is responsible for functions of Karmendriya and Gyanendriya, so Vata is controlling of all the central nervous functions and all kind of movements in the body and diseases caused by Vata in its vitiated condition is called "Vata-vyadhi."

Vata vyadhi includes more than 80 Nanatmaja Vyadhi. "Vatadrute Naasti Ruja" clearly indicates importance of Vata in pain management. Acharya Charaka has stated that causes of all these Vatavyadhi can be divided in two types i.e. Dhatukshayajanya and Margavrodhajanya.

In, Ayurveda Shastra, Asthi Dhatu (Skeleton system) and Pakwashaya (Rectum) & other pelvic organs are considered to be the main places of Vata. Vata can be measured by only Shabda (Sound) & Sparsha (Touch).

All actions of the body, may be voluntary or involuntary governed by nervous system, explain that

- Nervous system is actual seat of Vata, which manifests as both the sensory and motor nervous system.
- Vata works as stimulant & controlling power over the mental state.

Definition of Vata Vyadhi

"Vata itself is a Vyadhi (disease)' By telling this, we would include the whole universe in the category of 'having disease' or 'diseased', and the whole

world would be diseased at any given point of time but practically it isn't. Vata is present. in everyone but it doesn't produce a disease in everyone and everyone in the world is not diseased. Vata is morbid (disease causing) only when it is vitiated.

'The disease which is caused by Vata dosha is called Vata Vyadhi'

An Asaadhaarana (uncommon, special) Vyadhi (disease) caused by Vikruta Vata (vitiated Vata) is called as Vata-Vyadhi' (M.Ni.22)

VATA VYADHI NIDANA

Different types of VATA (natural and distorted actions) -

1. Prana Vayu - The place of Prana Vayu has been accepted by the Ayurveda acharyas as head, throat, heart, lungs etc. Acharya Bhel has considered the head as the place of mind and Acharya Sushruta has considered it as the heart.

Head - the place of the mind (Bhela)

Heart - 'The heart is said to be the seat of consciousness of the embodied by Sushruta'

The views of both the Acharyas seem to be correct, because Acharya Charak has made it clear in the body space that air itself.

All those diseases in which are found in the brain can also be considered to be caused by the distortion of Prana Vayu.

- **2.** Udan Vayu Acharya Sushruta has called it the best (Pavanottam) among all the vayu. Its location is mainly the throat and pulmonary plexus. Its function is to convey speech properly. Its deformity causes speech related disorders such as-
 - · Hoarseness of voice
 - Dysarthria
- **3.** Vyana Vayu Its place is the heart and the entire body. Its main functions are blood circulation, involuntary movement of muscles, heart and artery circulation.

VYAN VAYU is responsible for supply of nutrition to all parts of the body. Due to its deformity or abnormality, there is a possibility of the following disorders occurring, or the following disorders occur due to its deformity -

Circulatory disorders - Hypertension, Artery block.

Nutritional disorders - Malnutrition (Underweight)

Degenerative changes - Arteriosclerosis. Muscle wasting etc.

- **4. Samana Vayu** Its location is the stomach and other digestive institutions (Epigastric plexus). Its pathology leads to disorders related to the digestive establishment, e.g.
 - Chronic constipation
 - · Abdominal pain
 - Sprue
 - Diarrhoea
- **5. Apana Vayu** Its location is the anus and pelvic region. It is mainly helpful in urine and stool excretion and parturation. Due to its deformity, there is a possibility of causing the following disorders, such as
 - · Retention of urine
 - Urinary Lithiasis
 - Polyuria

17. Sustainer of life.

18. Controller of respiration

- Hemorrhoid
- Abnormal presentation and development of foetus.

FUNCTIONS OF VATA –(Ch.SU 12/7)

1. Co-ordinator of various systems.
2. Source of five Vayu.
3. Activator of different bodily activity.
4. Regulation of Psychic.
5. Union & promotor of senses to their objects.
6. Promotor of sensory senses to act on their object.
7. Controller of different tissues.
8. Maintain the integrity of body.
9. Promotor of speech.
10. Regulator & co-ordinator of sound & touch.
11. Promotor of joy & courage
12. Initiator of all types of Agnis (bio-fire)
13. Helps in excretion of wastes. Convertor of gross channels
14.Controller of the dosas.
15. Into subtle channels.
16. Causative factor of formation of foetus.

Acharya susruta explains Vata actions-

Vyana vata regulates of all functions of body.

Udana vayu regulation of respiration system etc.

Prana vayu intake of food materials etc

Samana vayu divide the saara and kitta of Ahar rasa.

Apana vayu maintaining the body properly.

Causes of vata vyadhis(Ch.Chi.28/15-18)

Forcible withholding of natural urges (Adharaneeya vega)

1.	Dry food, Cold food, less quantity of food	
2.	Foods which are light to digest excessive indulgence in sexual activities	
3.	Excessive awakening during night times	
4.	Improper administration of treatments mainly cleansing treatments like etc. Vamana (therapeutic emesis), Virechana (therapeutic purgation)	
5.	Excessive elimination/ discharge of doshas	
6.	excessive bleeding, excessive running, jumping, swimming, walking, exercises,	
7.	Excess thinking, stress, grief, fear, Depletion of tissues	
8.	Debility due to chronic and longstanding diseases	

SAMPRAPTI -

9.

A) Samanya Samprapti

Due to the intake of Vatakara Aahara and Vihara, Vata Dosha get vitiated, which lodges in Rikta Strotasa Le. Strotas, where there is presence of Shunyata of Snehadi Guna, producing diseases related that Strotas.(Ch.Chi 28/18)

Acharya Vaghbhata mentioned the Samprapti of Vata Vyadhi like Dhatukshaya aggravates Vata, which travels throughout the body and settles in Rikta Strotas and further vitiates the Strotas leading to the manifestation of Vata Vyadhi.

B) Vishesh Samprapti

Dhatukshayajanya Vatavyadhi like Shleshma Bhava decreases in the body Shleshaka Kapha in the joints also decreases in quality and quantity where in Sandhi Shaithilya is seen. Ashrayashrayi Sambandha also leads Asthidhatu Kshaya leading to Khavaigunya in the bone and joints.

In Dhatukshayajanya avastha pain is reduced after touching or giving pressure. This happens because vitiated Vata present in Rikta Strotas is directed to different direction resulting in pain reduction for that moment.

In **Margavrodhajanya avastha** pain is aggravated after touching or giving pressure because of obstruction. In this state Vata cannot move due to Avarodha. After deciding Avastha of Vatavyadhi we can decide the treatment. The choice of drug varies & differs from patient to patient & Vaidya to Vaidya.

VATA VYADHI-POORVROOP

Premonitory symptoms of Vata Vyadhi

1. Contraction/contractures in affected body parts

Avyakta Lakshanas (un-manifested symptoms or feebly manifested symptoms) are the premonitory symptoms of Vata Vyadhi.(Ch.Chi 14)

GENERAL SIGNS AND SYMPTOMS OF VATA VITIATION

1. Contraction/ Contractures in affected body parts
2. Stiffness in Joints
3 Piercing type of pain in bones and joints
4. Erection of Hair follicles
5 Delirium
6. Stiffness in legs. back and head
7. Lameness with one Leg
8. Lameness with both Legs
9. Forward or backward bending of the body
10. Dystrophy of organs
11. Insomnia
12. Missed abortion
13. Loss of semen
14. Loss of menstruation/ovulation
15. Throbbing sensation in the body
16. Numbness in body
17. Disturbances of symmetry of head, nose, eyes and neck/contractures of various body Parts
18. Tearing Pain
19. Pricking Pain
20. Restlessness
21. Convulsions
22. Weakness or Lethargy

CLASSFICATION OF VATA VYADHI

- 1. Dhatugata
- 2. Ekangata

- 3. Sarvangata
- 4. Avaranajanya
- 5. Kosthagata

DHATUGATA

I. Rasagata/Twakagata - peripheral neuritis	
II. Raktagta Hypertension	
III. Mamsagata vata - myopathy	
IV. Medogata - deep muscle fatigue	
V. Asthigata- rheumatism	
VI. Majjagata - osteomyelitis	
VII. Sukragata- sex neurosis	

EKANGA GATA

I. Avabahuka - frozen shoulder
II. Anshshosha - wasting of shoulder muscle
III. Koshatoshishaka - pyogenic arthritis of knee
IV. Kampavata - tremors and palsy
V. Khalli – cramps
VI. Gridhashi – sciatica
VII. Jivahastambha - glossal palsy
VIII. Padadaha - burning of feet
IX. Padaharsha - tingling sensation of feet
X. Vishwachi - brachial neuritis
XI. Vatakantaka - ankle sprain
XII. Siragata vata - engorged veins
XIII. Snayugata vata – fibromyalgia
XIV. Sandhigata vata – osteoarthritis
XV. Sirograha - trigeminal neuralgia
XVI. Manya stambha - torticolis or neck rigidity
XVII. Hanugraha - lock jaw

SARVANGATA/GENERALISED VATAVYADHI

I. Ardita	Facial paralysis
II. Aachepaka	Convulsions
III. Apatanaka	Tetanus like convulsion
IV. Apatantraka	Hysteria like convulsion

V. Kampavata	Tremors/ palsy/parkinsonism
VI. Kalayakhanja	Lathyrism
VII. Khanja	Lame from one leg
VIII. Pangu	Lame from both side
IX. Pakshaghata	Paralysis/ hemiplegia
X. Snayugata vata	Diseases of tendons and ligaments

AVARANA JANYA VATA VYADHI

CHARAK-42, SUSHRUT-10

I. Paraspar avarana	20
II. Pittavaritta vata	01
III. Kaphavaritta vata	01
IV. Saptadhatu	07
V. Malaavaritta	01
VI. Sarvadhavaritta	01
VII. Pittaavaritta	05
VIII. Kaphavaritta	05

KOSTHAGATA

I. Amashayagata	Acute gastroenteritis
II. Aanaha	Distension of abdomen or constipation.
III. Asthila	BPH
IV. Adhyaman	Generalised tampanitis
V. Urdhavata	Erructations/ belching
VI. Gudasthata vata	Obstructive entero uropathy
VII. Tunni	Renal colic
VIII. Pratitunni	Urethral colic
IX. Pratyadhyama	Gastric tampinitis
X. Pakvashayagata vata	Ibs
XI. Pratyasthila	Retrovessicle tumou
XII. Mutraavarodha	Retension of urine
XIII. Gyanendriyagata vata	Neuropathies of sense organ

VATA VYADHI CHIKITSA-

As per Astang hirdya sutra 13/1-3:

1.	Oleation
2.	Fomentation
3.	Mild biopurification
4.	Massage (Oleous in nature)
5.	Deep pressure rubbing tapping by hand & feet.
6.	Appetiser
7.	Digestant
8.	Drugs that promote brain function.
9.	Oil based enema.
10.	Sweet, sour and salty food intake
11.	Vatanulomak chikitsa
12.	Niruha basti and Anuvasan basti- Decoction & oil-based enemas
13.	Nasya karma- Use medicines through nasal route
14.	Dhumrapana - Medicated smoking

GENERAL MANAGEMENT OF VATA DISORDERS - IMPORTANCE OF SNEHANA (OLEATION THERAPY) AND SWEDANA (SUDATION THERAPY)

The diseases caused exclusively by Vata, and when there is no avarana, the initial treatment involves Snehana therapy. This includes the administration of ghrita, vasa, oil, and majja.

Once the patient becomes fatigued or averse to these oleation substances, treatment shifts to include milk, vegetable soup, and various meat broths (from domesticated, aquatic, and marshland animals), all enriched with fat. Additional preparations like Payasa (a rice and milk dish) and Krishara (a mixture of rice, legumes, etc.) with sour ingredients and salt may also be used. Anuvasana (medicated enema), nasya therapy, and tarpana foods are recommended.

After adequate snehana, the patient undergoes swedana therapy. The body should be properly snigdha before starting swedana, which includes methods such as Nadi Sweda, Prastara Sweda, and Sankara Sweda. These therapies help in relieving symptoms like tingling, pricking pain, ache, stiffness, oedema, and spasticity. Repeated snehana and swedana treatments help soften the body and prevent Vata disorders from becoming entrenched. (Ch.Chi 28/75-83)

Specific Chikitsa-

Dhatukshayajanya Vatavyadhi- treated by-

- Controlling vitiation of Vata
- Correcting the destruction of Dhatus
- Snehana chikitsa is extremely important
- · All kind of snehana are expected here
- Importance of snehana- snehana destroys vayu, visheshtah tail Sneha due to snigdha, ushna and guru guna

2) Margavrodhajanya Vatavyadhi-Can be treated by

- Removal of obstruction
- Correcting the direction of flow of Vata.
- In the case of margavrodha vata the treatment should be Kapha and Pitta aviruddha and Vatanuloman. This treatment is beneficial for sarva sthan avrut vata.

SPECIFIC TREATMENT OF VARIOUS CONDITIONS

As per charak chikitsha 28/89-99

Koshta gata vata: Consume alkaline substances to facilitate digestion. Use digestive aids like sour substances to help eliminate toxins.

Guda and pakwashaya gata vata: Treatments involving therapeutic enemas, purgatives, and other internal therapies should be applied.

Amashaya gata vata: Oil treatments, enemas with medicated oils, and sweating therapies should be used.

Hridaya gata vata: Use oil treatments, appropriate dietary adjustments, and cold therapies if there are associated symptoms.

Rakta gata vata: Employ purgation, bloodletting, and other external and internal treatment

Mansa gata vata: Use purgation, calming treatments, and oil therapy.

Meda gata vata Utilize oil treatments and dietary adjustments to strengthen the tissues.

Asthi and majja gata vata- both external and internal treatments with oil should be used. External treatment includes massage with oil, and internal treatment involves consuming oils and vata-reducing preparations.

Shukra gata vata- strengthening and semen-enhancing treatments should be applied. If the passage of semen is obstructed, purgation (virechana) should be administered. After purgation, follow with appropriate diet and methods to enhance strength and semen, and ensure mental well-being.

Garbhashya gata vata -When vata causes dryness in the womb and affects the foetus, to nourish the womb, administer milk cooked with sugar, gambhari bark, and gulkand.

Hridayaya gata vata - conditions involving the heart where vata is aggravated, administer milk prepared with shaliparni using the kshirapak method.

Nabhi gata vata - conditions where vata is aggravated in the neval area, causing pain or cramping, feed fish meat cooked with bel fruit.

When there is general or localized cramping- due to aggravated Vata, apply poultices to the affected areas.

Vata-related spasticity affects the limbs, massage with sesame oil prepared with a paste of black gram and rock salt.

Bahugata and murdha gata vata – Vata related disorders in the arms or head (such as neuralgia, shoulder pain, etc.), take nasal administration of wind-reducing oils and consume wind-reducing ghee or oil after meals.

Vata-related disorders below the neval area-(rectum, urinary bladder etc.) then treatment should be niruha and anuvasana vasti and gritapana before and after meals.

PAKSHAGHATA (PARALYSIS)

This condition involves an imbalance of Vata affecting one side of the body, either the right or the left. It disrupts the physical functions of that side, causes localized pain, and may also impair speech.

Ekangavata aggravated Vata attacks any one part of the body (left or right), dries up the ends and nerves of that part, causes contraction of one hand or one leg and there is pain like pricking of a needle in the affected part and colic. This type of disorder should be considered a one-sided disease.

Sarvangvata When the aggravated vata puts the body's nerves and nerves to sleep and renders the whole body useless and pain occurs in all parts, then it should be known as Sarvangvata.

Types of paralysis

Paralysis can occur in the following forms-

Monoplegia: When Vata becomes impaired and affects the veins and nerves in a specific part of the body, it causes the loss of function in one limb, either an arm or a leg. The affected part becomes inactive, thin, and painful. Some scholars refer to this as Ekanga disease.

Quadriplegia: This occurs when Vata dries up and affects all the veins and nerves throughout the body, leading to total paralysis. In this condition, the entire body becomes inactive.

Hemiplegia: In hemiplegia, one half of the body (usually from the waist down) becomes inactive, and there may be a tendency for spontaneous urination.

Paraplegia: Paraplegia refers to paralysis affecting the lower half of the body, either from the waist down or involving only the lower limbs. In this condition, the affected organs and functions are impaired along the length of the body, either on the right or left side.

Partial Paralysis: Use treatments like oil massages and other therapies to restore function.

Full Paralysis: Apply comprehensive treatments including oils, massages, and therapeutic enemas.

Localized Pain and Muscle Weakness: Use warm oils, local treatments, and proper diet to address the issues. Improved Mobility and Function: Employ therapeutic measures that enhance the strength and flexibility of affected areas. Treatments for each condition should focus on balancing Vata and alleviating symptoms through appropriate therapies and dietary adjustments.

STROKE (PAKSHAGHAT)

According to Ayurveda, a Stroke can be corelated with Pakshaghata, caused due to the vitiation of Vata dosha, which controls the motor and sensory activities in the body.

Strokes are medical emergencies that stop or interrupt the flow of blood to the brain.

The five types are:

- a. Ischemic stroke
- b. Haemorrhagic stroke
- c. Transient ischemic attack (mini-stroke)
- d. Brain stem stroke
- e. Cryptogenic stroke (stroke of unknown cause)

Symptoms of Stroke

- 1. Face drooping:
- 2. Arm weakness:
- 3. Speech difficulty:

A) Ischemic Stroke

An ischemic stroke happens when a blood vessel supplying blood to brain gets blocked by a blood clot.

Symptoms of ischemic stroke

The symptoms depend on which parts of brain are affected.

- 1. Sudden numbness weakness of face muscles, arm, or leg, often on one side of the body
- 2. Confusion
- 3. Problems speaking

- 4. Dizziness,
- 5. loss of balance or coordination, or walking
- 6. Vision loss or double vision

Types of ischemic stroke

There are two main types of ischemic stroke:

- 1. **Thrombotic strokes**. They're caused by a blood clot that forms in an artery that supplies blood to brain, also called an atherosclerotic stroke.
- 2. **Embolic strokes** happens when a clot forms somewhere else in body and travels through the blood vessels to brain.
- B) Haemorrhagic Stroke- when bleeding in brain damages nerve cells.

There are two types of haemorrhagic stroke.

- 1. Subarachnoid haemorrhage in the area between brain and skull.
- 2. Intracerebral haemorrhage is bleeding inside the brain.

Symptoms

- 1. Intense headache -
- 2. Confusion
- 3. Nausea or throwing up
- 4. Sensitivity to light
- 5. Problems with vision

C) Transient Ischemic Attack or Mini-Stroke

Ischemic strokes also include something called a "mini-stroke" or a TIA (transient ischemic attack). This is a temporary blockage in blood flow to brain.

Symptoms of TIA

- 1. Numbness/weakness on one side of body
- 2. Confusion
- 3. Dizziness or loss of balance
- 4. Trouble talking or understanding
- 5. Problems with vision
- 6. Severe headaches

D) Brain stem stroke

A brain stem stroke occurs when the brain stem's blood supply is cut off. Symptoms included:

- 1. Dizziness, vertigo, or balance problems
- 2. Vision changes or difficulty moving your eyes
- 3. Facial drooping
- 4. Weakness in the arms or legs
- 5. Numbness
- 6. Difficulty speaking or swallowing
- 7. Sudden severe headache
- 8. Changes in alertness

E) Cryptogenic stroke

Strokes without a known cause are called cryptogenic stroke.

Trouble with central nervous system functions.

Symptoms of cryptogenic stroke are the same as other strokes.

SHAMAN CHIKITSA

A. Rasa/Bhasama/Pisthi- Dose 125-250 mg Anupan- Madhu

Swarana yukta-	Without Swarna
I. Vrihat vata chintamani rasa	I. Vatagajankusha rasa
II. Rasraja rasa	II. Mahavatagajankusha rasa
III. Yogendra rasa	III. Vata vidhawansak rasa
IV. Ras rajeshwar rasa	IV. Ekangveer rasa
V. Chintamani rasa	V. Sameerpannag rasa
VI. Vata chintamani rasa	VI. Vatari rasa
VII. Navaratnamriganka rasa	VII. Sarvangsundar rasa
VIII. Tralokchintamani rasa	VIII. Vatagajankusha rasa
IX. Chaturmukha rasa	
X. Swarana bhasma	

B. Churna - Dose 2-5 gm Anupan- Madhu/Jala	C. Kwath/kashya - Dose 20-40 ml Anupan- Jala	D. GHRITA - Dose 10-20 ml Anupan- Dugdha/ushnodaka
1. Aswagandha churana	1. Maharasanadi kwath	1. Rasnadi Ghrita
2. Nagaradi churana	2. Rasnasaptak kwath	2. Panchatikta Ghrita
3. Panchala churana	3. Rasanadashmula kwath	3. Ashwagandha Ghrita
4. Narsingh churana	4. Rasnadi kwath	4. Dhanawantar Ghrita
5. Sadharan churana	5. Goshuradi kwath	5. Veerataradi Ghritha

E.Taila		F. RASAYANA YOGA- Dose 10-25 gm Anupan- Dugdhac
Abhyantara Prayog - Dose 10-20 ml Anupan- Dugdha/ ushnodaka	Bahya Prayoga (Sarwanga / Sthanik abhyanga/ basti)	
1. Rason tail	1. Narayan tail	1. Chavanyaprasha
2. Bala tail	2. Prasarani tail	2. Brahma rasayana
3. Ashwagandha tail	3. Mahamasha tail	3. Shilajatu
4. Rasonadi tail	4. Vishgarbha tail	4. Shiva gutika
	5. Amritadi tail	

G. EKALA AUSHADHI/SINGLE DRUG

Nirgundi, Rasana, Pippali, Bala, Dashamula, Shatavari, Guggulu, Ashwagandha, Devdaru, Shunthi, Eranda, Kupilu, Lashuna, Shilajatu, Vatsnabh, Bhalataka, Brahami, Dhatura, Hingu, Jatamanshi, Vidarikanda, Sahijana, Vacha.

H. PATHYAPATHYA FOR VATA VYADHI

- 1) Diet- sweet, sour, salty and hot food, milk, ghrita, snehana, swedana, vasti, mild Exercise etc.
- 2) Incompatible Vata-enhancing diet like ruksha, sheeta ahara and vihara eg. Green peas etc, consumption of bitter and spicy vegetables and fruits, cold rough food, consumption of cold and eastern wind, excessive labour, anxiety, awakening, sexual intercourse, etc. are incompatible in Vata diseases.

I. YOGASANA/PRAKRITIK CHIKITSA
1. Surya namaskar
2. Sarvangasana
3. Vajrasana
4. Halasana
5. Bhadrasana

- 6. Gomukhasana
- 7. Padyasana
- 8. Ardhamatasyasana

CLINICAL APPROACH TO VATA VYADHI

A. Degenerative diseases

I. motor neurone disease

Dhatu Kshayajanya disease

B. Autoimmune disease

Margaavarodhajanya disease

- A. Ankylosing spondylosis
- B. GBS
- C. Myasthenia gravis
- D. Multiple sclerosis
- E. Acute transverse myelitis

C. Others

- I. Pott's disease
- II. Syringomyelia
- III. Sciatica nerve neuropathy
- IV. Ligamentum flavum hypertrophy

NEUROLOGICAL EXAMINATIONS

- I. General examination
- II. Motor symptoms-power, coordination, nutrition and involuntary movements.
- III. Sensory Examination
- IV. Cranial nerve examination
- V. Sphincter disturbances
- VI. Higher functions (mental status examinations)
- VII. Etiological
- VIII. Reflexes (DTR, Superficial)

1. GENERAL EXAMINATIONS

- I. Build, nutrition.
- II. Nails and conjunctiva: Pallor, clubbing, cyanosis, icterus.
- III. Lymphadenopathy, edema on feet, JBP.
- IV. Spine; for kyphoscoliosis.
- V. Skin: for hypopigmented areas, hyperpigmented areas, café-au-loit spots, nodules etc.
- VI. Thickened nerves: thickning of nerves is a conspicuous feature in leprosy and hypertrophic neuropathy of infancy i.e. dejerine and salts. Milder degree of clinically appreciable thickening may occur in peroneal muscular atrophy and amyloidosis.

EXAMINATIONS 2. MOTOR SYMPTOMS

- * Power 1. Upper limbs:-
- A) Proximal Lifting the arm above the head
- B) Distal Writing, buttoning
- 2. Lower Limb :-
- A) Proximal Climbing stairs up and down
- B) Distal Slippers falling from foot, Running, Walking

Power Graded as Follow (Each and every muscle)-

Grade	Power
0	No muscle contraction is seen or identified with palpation; paralysis.
1	Muscle contraction is seen or identified with palpation, but it is insufficient to produce joint motion
2	The muscle can move the joint it crosses through a full range of motion only if the part is properly positioned so that the force of gravity is eliminated.
3	The muscle can move the joint it crosses through a full range of motion against gravity but without any resistance.
4	The muscle can move the joint it crosses through a full range of motion against moderate resistance.
5	The muscle can move the joint it crosses through a full range of motion, against gravity, and against full resistance applied by the examiner.

- * Nutrition Wasting of muscles, atrophy and Hypertrophy
- * Coordination -
 - 1. Unsteadiness (For cerebellar ataxia)
 - 2. Difficulty in feeling the ground and unsteadiness increasing in the dark (For sensory ataxia)
 - 3. Difficulty in reaching the target

* Involuntary Movements -

Chorea, tremors, athetosis, dystonia, flexor spasm

3. Sensory Examination

- I. Pain
- II. Touch
- III. Temperature

4. SPHINCTER DISTURBANCES

Bladder: -

- I. feeling the sensation of bladder fullness.
- II. Initiation of micturition immediately when desired.
- III. Control of micturate has occurred.
- IV. Complete evacuation of the bladder area feeling of residual urine.
- V. Histology of catheterization.

Bowel as above

Impotency: -in males

5. CRANIAL NERVES

- A. Sensation of smell- 1st cranial nerve
- B. Vision acuity and colour- 2nd cranial nerve
- C. Diplopia, squint: -3rd, 4th and 6th cranial nerve
- D. Sensation (tingling, numbness over the body and difficulty to chewing):
 - 5th cranial nerve
- E. Facial asymmetry, dribbling of saliva from the angle of the mouth, statis of food in the mouth: -7th cranial nerve
- F. Vertigo, tinnitus, deafness: 8th cranial nerve.

6. HIGHER FUNCTIONS

- 1. Mental symptoms: consciousness, delirium, hallucinations.
- 2. Speech disturbance nation through content, insight, emotion state. (ICP-2-15 mm of Hg)
- 3. Symptoms of raised intracranial tension like headache, projectile vomiting, blurred vision, altered sensation, changes stroke, bradycardia, hypertension, yawing, hiccupping respiration, papilledema.
- 4. Unconsciousness
- 5. Convulsion: -inquire for aura, tonic and clonic convulsion, deviation of eyes, incontinence of urine and stools, tongue bite, fall and injury, post convulsion drowsiness or unconsciousness, sleep attacks.

8. REFLEXES

Graded as

Absent	0
Diminished	+1
Normal	+2
Brisk	+3
brisk with clonus	+4

There are two type of reflexes -

I. Superficial reflexes
II. Deep tendon reflexes
1.SUPERFICIAL REFLEXES
A. Planter reflex (S1)
B. Abdominal reflex (T6-T12)
C. Cremesteric reflexes (L1)
D. Bulbo cavernous reflex (S2-S4)
E. Anal reflex (S4-S5)
F. Hoffmann's sign
2. DEEP TENDON REFLEX (DTR)
A. Biceps
B. Triceps
C. Supinator (Brachioradialis)

D. Finger flexion	
E. Knee jerk	
F. Ankle jerk	

GAIT DISORDER NEUROGENIC OR MYOPATHIC

Gait means pattern of walking or manner of walking.

NORMAL WALKING -

- Wide base gait cervical myelopathy
- Waddling gait proximal myopathy
- Walking on tip toe- S1 weakness
- Walking on heels L5 weakness

Gait is an essential component of neurological examination.

Unexpected abnormalities may be detected.

TYPES OF GAITS

TINIT ATERNAT

UNILATERAL
Spastic gait - hemiplegia, circumduction
Limping - antalgic gait
BILATERAL
spastic gait paraplegia
Scissor gait - cross legged or scissor gait - cerebral diplegia
Ataxic gait
Waddling gait

TYPES OF GAITS IN VARIOUS DISEASES -

I. Spastic gait	Hemiplegia
II. Scissor's gait	Cerebral diplegia, paraplegia, quadriplegia.
III. Stamping gait	Ataxia
IV. Reeling gait	Cerebellar ataxia
V. Festinating gait:	Parkinsonism
VI. High steppage gait	Anterior tibialis paralysis, peripheral neuropathy
VII. Waddling gait	Muscular dystrophy
VIII. Limping gait (Antalgic gait)	Sciatica
IX. Hysterical gait	A bizarre gait not resembling any known pattern

SIGN AND SYMPTOMS -

-	n 1			
-	Romberg	sign-	cerebral	ataxia

II. Kerning sign-meningitis

III. Brudzinski sign-meningitis

IV. SLRT-Sciatica

V. Trendelenburg sign/waddling gait-muscular dystrophy

VI. Hoffmann's Sign/finger flexor reflex-UMN lesion

VII. Laseque's sign-Sciatica

DIFFER BETWEEN UPPER MOTOR NEURON AND LOWER MOTOR NEURON

	UMN	LMN
1 1		Anterior horn cell, nerve root, peripheral nerve, N-M junctions
Paralysis	Group of Muscles of One or more limb	Individual Muscles Paralysed
Muscle Tone	Spasticity/Rigidity	Flaccid
Deep Tendon Reflexes	Exaggerated	Diminished
Abdominal Reflex	Absent	Present
Babinski Sign	Positive	Absent
Fasciculation	Absent	Present
Muscle Atrophy	Less	More
Sensory Loss	Cortical Sensation	Peripheral Sensation

CHAPTER 11

Understanding of Metabolic Syndrome in Ayurveda

Dr. Mamata Bhagwat

Prof and Head of Dept of Kayachikitsa, KTG Ayurvedic Medical College, Bengaluru, Karnataka.

METABOLISM & METABOLIC ERROR

Total reactions with the cell component or within a cell throughout the body that provide the body with energy which gets used for vital processes and the synthesis of new organic material is called Metabolism. The metabolic activity is continuous throughout the day in each and every component of the body. The food that is consumed by the person undergoes into various changes in the body namely- digestion, absorption, assimilation, storage, transformation into the required molecule etc. Finally all the stuff eaten is transformed into various compound again like hormone, enzyme, immunoglobulin, WBC, RBC, etc.

The process of these transformation and storage, conversion into energy as and when required is the actual process of Metabolism and Ayurveda calls this entire process as AGNI VYAPARA or PAKA KRIYA.

Metabolic disorders are resulted occur when the breakdown of complex food to its simpler components becomes disrupted. These disorders in metabolism can be inherited which are called as Inborn errors of metabolism, or they may be acquired during the lifetime. Inborn errors of metabolism are a heterogeneous group of disorders that may be inherited or may occur as the result of spontaneous gene mutations. These diseases involve failure of the metabolic pathways involved in either the break-down or storage of carbohydrates, fatty acids, and proteins.

Grossly a metabolic error is disorder in which is wrong pathways of metabolism lead to further wrong conversion of food material into their final forms in the body and the disturbance in the ability to turn food into energy as well as get rid of waste. This whole disturbed process is due to altered Paka Kriya of Agni or Disorganised Agni Vyapara which can be labelled as the condition of Agnimandya as per the explanation given in the classical texts of Ayurveda. Because of the disturbed and disrupted Agni the body will attain inability to properly convert one metabolite to another metabolite.

RESULT OF DISORGANISED AGNI VYAPARA

The abnormalities or manifestations of metabolic disorders are either due to the accumulation of large amounts of one metabolite or a deficiency of one or more metabolites. This gives an idea of the concept of eka desha vradhi anyasthan kshaya, as mentioned in Samhitas. That is why the metabolic disorders may manifest in the body either in the form of Santarpana Janya Vikaras or at times even the Apatarpana Janya Vikaras also.

COMMON FEATURES of DISTURBED METABOLISM

- Unexpected weight gain
- Unintended weight loss, or a failure to gain weight and grow in babies and children
- Tiredness and lack of energy
- Changes to the skin color, bruising easily, thinning, slow healing, inflammation,
- Altered circulation, vascular blocks, respiratory issues
- · Altered immune response, abnormal growths and accumulation
- Pain abdomen and vomiting
- Altered appetite, Abnormal eating rhythm
- Developmental delays in babies and children

CAUSES OF METABOLIC DISTURBANCE

There are many causes to note, but No Cause is Specific. Commonly two different mode of manifestation are identified. They are broadly classified into inherited metabolic disorders and acquired metabolic disorders. Genetic

inheritance leads to metabolic disorder after gene mutation in the present generation.

If an organ involved in metabolism gets diseased or damaged like the pancreas or thyroid the metabolic disorders are likely to result as a consequence to the damage of the concerned organ.

Some metabolic disorders don't have a known cause. For example, researchers aren't sure why some people get type 1 diabetes, an autoimmune disorder.

COMMON DISORDERS OF DISTURBED METABOLISM:

We can see two different sectors of Metabolic Disorders namely-

I) INHERITED METABOLIC DISORDERS:

- Adrenoleukodystrophy.
- Diabetes, type 1.
- · Gaucher disease.
- Glucose galactose malabsorption
- Hereditary hemochromatosis.
- Lesch-Nyhan syndrome.
- Maple syrup urine disease.
- Menkes syndrome.

II) ACUIRED METABOLIC DISORDERS OR LIFE STYLE DISORDERS:

Lifestyle and metabolism are closely connected. Lifestyle habits can set abnormal pathways of metabolism which in future manifest various kinds of metabolic disorders. An unhealthy lifestyle can lead to metabolic disorders that can become serious illness at times. To mention few...

- Heart Disease
- Obesity
- Type 2 Diabetes
- Stroke
- Hypertension
- COPD
- Asthma

- Osteoporosis
- Thrombophlebitis

IDEAL METABOLISM

Individuals who have proper metabolic activity tend to maintain weight without much variables and excessive fluctuations. They also tend to have good and consistent energy levels throughout the day experiencing minimal fatigue. Metabolic Rate is the amount of energy expended by an individual in a given period of time. During the time of rest and physical inactivity, the metabolic rate is known as Basal Metabolic Rate- BMR. An average man has BMR of around 7,100kJ per day while an average woman will have a BMR of around 5,900kJ per day. Like this the BMR varies with gender and age also.

- Metabolism that involves the chemical processes converting foods and drinks into energy like- Metabolism of lipids, proteins and carbohydrates, glycolysis,
- Metabolic activation of body components,
- · Oxidative phosphorylation to release energy,
- Tissue anabolic activity,
- Other metabolic activities that are also connected with the energy release and activation include- Breathing, Blood circulation, Digestion in the gut, growth and repair of cells, maintaining hormones and enzymes levels, temperature regulation in the body.

WHAT IS METABOLIC SYNDROME?

The term Metabolic syndrome refers to a cluster of associated symptoms composed of impaired fasting glucose, abdominal obesity, hypertension and dyslipidaemia. It is also associated with cardiometabolic risk factors associated with increased risk of multiple chronic diseases, including cancer and cardiovascular disease.

Metabolic syndrome is not a disease in itself. It is group of disorders manifested as a result of faulty metabolism. It involves group of risk factors like high blood pressure, high blood sugar, unhealthy lipid levels, obesity, chronic inflammation and the relative complications.

Metabolic syndrome is called by the terms - Syndrome X, Insulin resistance syndrome, Cardiometabolic syndrome, Dysmetabolic syndrome

HOW TO DIAGNOSE METABOLIC SYNDROME?

Patients with any 3 of the following features are diagnosed as Metabolic Syndrome

- 1. Central obesity (\geq 88cm in F and \geq 102cm in M)
- 2. 1. Hypertriglyceridemia (≥150 mg/dl)
- 3. Low levels of HDL (<40 mg/dl in men or <50 mg/dl in women)
- 4. Hyperglycaemia (fasting ≥100 mg/dl)
- 5. Hypertension (≥130/85 mm Hg)

FACTORS INFLUENCING METABOLISM:

- Lifestyle
- Inheritance
- Stress
- · Chronic disease
- Long term medication
- Not undergoing shodhana
- Oral contraceptives
- Substance abuse
- · Vegadharana

WHAT IS MEANT BY LIFESTYLE?

Lifestyle is THE WAY THAT WE LIVE!!!!

The living conditions, behaviour, habits that are typical to an individual or a group that includes Habits, Attitudes, Tastes, Moral Standards, Economic Levels, What You Eat, How You Sleep, How much you sleep.

- How/How Much/What/Where/When we Talk
- · How much you exercise, how long we keep sitting
- What level of anxiety/ tension we come across
- · What is the control level of our emotions
- What is our control on life happenings and ambitions/goals/targets....

VARIABLE LIFESTYLES:

- Active lifestyle
- Sedentary lifestyle
- Healthy lifestyle
- · Solo lifestyle
- · Rural lifestyle
- Urban
- Nomadic
- Bohemian
- Digital

WHAT IS AN IDEAL LIFESTYLE?

Lifestyle tends to be healthy if the following factors are taken care of...

- Healthy Balanced Diet / HITA AAHAARA
- Drinking Adequate Water / Recall Trividha Kukshi concept and Kledana of the body
- Regular Exercise / Yatha Bala Vyayama
- Plenty of Sleep / Nidra as Trayopastambha
- No wrong Habits like smoking, Alcohol ete / Indriya Nigraha Prajnaparadha, Indriyartha Sannikarsha
- Mental and physical well-being / Ahitebhyo Arthebhyo Mano Nigraha
- Ahaara, Nidra, Vyayama, Vyavasaya, Artha, Kalyanamsha, Dharma, Atma Vijnana

IMPORTANCE OF AHAARA

Ahara plays a major role in maintaining healthy lifestyle. Because the man is an outcome of what he eats, so also the disease.

HOW DO WE MISMANAGE?

We miss to follow the proper food style and lifestyle because of many reasons. Excessive inclination to have outside, junk, fast, and unsuitable food stuffs, untimely eating habits, excessive inclination to have more variety and large

quantities often. We forget the instructions given by our ancestors to have control over what we eat.

ERRORS WE COMMIT

- No/ Minimal Physical Exercise
- Continuous Sitting
- Physical / Mental Stress
- The food stuff that may lead to formatin of Leaky Gut?
- WHATEVER/WHENEVER/HOWEVER/ WHEREVER !!!!!!!
- Kala, Sanskara, Pramana, Vyavastha of Ahara are not considered.
- Shift Duties, Media Indulgence, Travels, Global Patterns

INFLUENCE OF LIFESTYLE ON METABOLIC ACTIVITY

Each and every physical as well mental activity we do influence our metabolic outcomes also. Low physical activity results in lower MR and thus energy release is restricted. Higher physical activity acts to have higher level of MR. Meanwhile, the mental activities like stress, anxiety, tension, eagerness, encountering danger ... etc. can influence greatly on MR.

For Example – NIDRA. The state of Nidra brings metabolic rate to basal level, where in abnormal sleep can vary the same.

INFLUNCE OF GRAMYA AHAARA

The food pattern we are following today fall in the category of Gramya Ahara that are explained in the classical texts. How the food influences the body components and the Manas are explained in systematic manner and consequential order. Few qualities of Gramya Ahara system are as follows-

- · the body factors get deranged
- In people with abnormal eating habits
- in people with habit of sleeping in day hours
- with inapropriate exercise pattrens
- · with mental stress and anxiety
- abnormal contents of food and inapropriate processing methods of food

OUT COME OF INDULGENCE IN GRAMYA AHAARA

The out come of regular indulgence in Gramya Ahara are serious and seriously impactful also. They are explained as follows-

- Muscle tissue are weakened.
- · Joints aand junctions are weakened
- · Rakta Dhatu gets disturbed
- Excessive deposition and abnorml metabolism of Medo Dhatu.
- Abnormal activities of Majja Dhatu including Hemopoiesis and cerebral activities
- · Reduced sexual potency and fertility
- Reduced life expectancy

GRAMYA AAHARA AND INDUCED DISEASES AND COMPLICATIONS

The diseases induced by long term indulgence in inappropriate food habits and unhealthy lifestyle. The induced diseases and resultant complications are listed like this-

- The person becomes weak and debilitated
- · Looses competence and ability to function properly
- · Inability to focus and determine
- · Looses enthusiasm and initiative power
- Dyspnea on exersion
- · Reduced physical ability for functioning
- · Reduced mentsl capacity and memory
- · Becomes abode of diseases and ailments
- Reduced life expectancy leaing to early early mortality

VIDAGDHA AHARA AS PRO-INFLAMMATORY

One more important factor in connection with food is Vidagdha Ahara. Vidagdha word means the food which is inappropriately cooked, processed, over processed or mixed with the contents that are not conducive to body, wrong methods of cooking or baking. The digestive system fails or takes abnormally long duration to recognise, digest, absorb and assimilate such kinds of food stuffs.

The intestines are the largest mucosal interface between the environment and us. When the intestines fail to go with the normal pattern of digestion process the junctions at various levels of intestine become abnormally activated and these incompetent tight junctions result into increased intestinal permeability, commonly referred to as 'leaky gut'. This can in turn cause the absorption of incompletely digested protein and antigens. These absorbed abnormal molecules over stimulate the immune system through the bloodstream and begin the process of inflammation wherever they settle in the body. The sticky, heavy, incompletely digested can deposit in vessels, viscera or any vital area leading to raised tissue morbidity and inflammation.

COMPLICATIONS OF CHRONIC INFLAMMATION

The inflammation process initiated by the abnormal molecules as a result of Leaky Gut are Chronic and low grade. That is why they go unnoticed without causing any acute manifestations and complications. When the chronic low grade inflammation has sufficiently damaged the host tissue, the complications arise and they are of serious grade by this time. They may be listed as mentioned below for example-

- Heart disease: Tachycardia, Hypertension, Increased cardiac output due to release of cholesterol and triglycerides to blood stream
- Asthma
- Obesity: Due to circulating cortisol
- Diabetes
- Headaches
- · Depression and anxiety
- Gastro intestinal problems: GERD, IBS, Hyperacidity, worsening of ulcers
- · Alzheimer's disease: Brain lesions caused due to stress
- Accelerated aging: 9 to 17 years of aging is accelerated by stress!
- Premature death: Stress reduces life expectancy.

STHOULYA -OBESITY AS AN EXAMPLE OF ABNORMAL METABOLISM

Sthoulya is a classic example of unhealthy lifestyle and abnormal metabolism. The etiological factors for Sthoulya are mentioned as- Lack of exercise, Day sleep, Excessive consumption of fat rich diet, excessive quantity of food intake, mental stress/ no mental involvement,

MEDOROGA... THE FOUNDATION FOR EVERY DISASTER

The Sthoulya Roga explained in the Samhitas of Ayurveda explains various resultant manifestations and subsequent complications. It appears to be the conglomerations of many disorders pertaining to abnormal metabolism thus attaining a brand name of Medoroga. The disorder indicates towards multi-system involvement, points out to affected physical functionality, sexual potency and fertility, affected competence and physical as well as mental ability, reduced endurance, affected social skills and competence, also affecting the life span and life expectancy of the person. It is well known fact that the abnormal fat deposition in the body leads to Insulin resistance, Hyperglycaemia, Type-2 Diabetes, affected liver functioning, affected renal competence in due course and also chronic inflammation turning to life threatening complications like Cancer, CAD, Hypertension, Stroke, IHD/ MI and so on... including Autoimmunity.

BALA GETTING COMPROMISED IN STHOOLA

Body looses its natural strength and endurance when the person becomes Sthoola. The Meda Dhatu alone getting nourished and deposited all over the possible spaces and regions in the body affects the metabolism of the rest of the Dhatu components there by damaging the tissue competence. As a consequence the person becomes debilitated, weak, abode of diseases and also develops mental vulnerability for upsets and abnormalities.

MANAGEMENT OF METABOLIC SYNDROME

1. NIDANA PARIVARJANA

As long as the individual is continuing the indulgence in the etiological factors, treatment is derogatory and the person goes on landing up in further stages of results and complications. So correction od the specific inducing factor becomes more important protocol in management of Metabolic Syndrome.

- a. The cellular homeostasis in Dhatu is Bala and it is the benchmark for tissue competence and endurance. It is reduced by indulgence in any etiological factor the individual is exposed to.
- b. Bala Hrasa begins with any nidana sevana.
 - Dosha vriddhikara/kopakara
 - Dooshya dourbalyakara
 - And khavaiguNya Kara.

- c. 3 couplets of nidana are identifiable- namely,
 - Viruddha ahara+ chesta
 - Mandagni + nischalatwa
 - Snigdha bhukta+ vyayama

2. LIFESTYLE DISORDERS MANAGEMENT

Big challenge is posed to the physicians treating Lifestyle disorders and Metabolic disorders when they encounter with the following observations in the patients..

- No regularity
- No commitment
- No goal setting
- Money and momentary pleasures take over everything else!!!

3. GENERAL STANDING INSTRUCTIONS TO BE GIVEN TO PATIENTS

- Eat what you need, not what you desire to.
- Consume planned diet
- Timely food habit
- · regular exercise
- · Indulge only in conducive food and activities

4. BENEFITS OF SHODHANA KARMA OR NITYA VIRECHANA

Administering Shodhana Karma in classical Virechana pattern, or Nitya Virechana dravya administration is going to be the best step to achieve detoxification, removal of clogs in Srotas, as well as enhancing the bio availability of the medicine we use in later period or along with as the case may be.

It is estimated that we are exposed to an average of over 500 chemicals externally daily and more number of those are stored in our body also. An average individual has at least seven pesticides tested in their urine on daily basis. It is imperative to have a daily detoxification lifestyle to get these unwanted toxins out of our system.

The body has a built-in metabolic detoxification system to address this problem by converting fat soluble toxins into inactive water soluble metabolites. (Function of Apana vata in other words). This process is carried out by a series of enzymes that transform, conjugate and transport the toxins out of the body. Induced Shodhana karma or Nitya Virechana karma will support this mechanism and detoxification is accelerated aiding into faster recovery.

5. BENEFITS OF VIRECHANA OR BASTI KARMA IN METABOLIC SYNDROME

- Virechana Karma and Basti Karma by virtue of their specific action of removing the morbid Dosha from the body have major impact on metabolic activity.
- The Agni Vyapara and Paka Kriya are improved by the clear Srotas as well as properly channelized functions of Vata.
- Evacuation of excreta is maintained regularly so that the body does not suffer any stagnation and clogging.
- Metabolic rate is enhanced and energy expenditure also improves. Excess fluid content is evacuated from the body allowing clarity in channels as well as enhanced permeability in the cells.
- Bio-availability of the medicine is improved so that the medicine acts on the target organ much faster and clear.
- Ability to sense and recognise are enhanced by clarity in the perceptive centres.
- Mental endurance and tolerance are improved by proper channelizing of mental factors.
- Morbid factors come down and the inflammatory changes get reduced.
- The disease symptoms come down and the body develops enhanced ability to sustain the external influences of climate, atmosphere, antigens, etc.

^^^^

CHAPTER 12

Manas Roga - Ayurvedic Concepts and Treatment Principles

Dr. Shubha. K.S

Professor & HOD, Dept. of Kayachikitsa, Mannam Ayurveda Co-Operative Medical College, Pandalam, Kerala

Ayurveda considers Manas and Shareera as two pathways for the manifestation of diseases. The shareera and manas have two different etiopathogenesis agents producing shareera and mano rogas- Somatic and Psychological disorders. However it is difficult to segregate both above disorders in absolute water tight compartment. Hence Ayurveda considers psychosomatic axis in both etiology and management of diseases. Manas is considered as the cause of liberation and attachments. The state of physical body is nothing but mere replica of state of mind and vice versa. The concept of mind should basically be understood properly to divert or manage it in an effective manner. This paper intends to analyze the deeper aspects of mind and various techniques or treatment principles to control the basic wandering nature and normalize its disordered state.

As every physical action produces breakdown of energy from one form to another in the same manner Mind has an immense storehouse of energy and is exhibited in the form of thoughts. Every thought has a definite energy and in return will have a definite reaction in the body. Thought is the causative factor or Kaarana Dravya and the condition it produces in human body is the effect or Karya. The energy produced by thoughts cannot be destroyed and is bound to produce effects in human body as per Newtons law. This karya kaarana sambandha proves it clear that every positive thought will produce a healthy positive physical environment. This is very much essential for the maintenance of shaareerika amd manasika Arogya. In the same manner negative thoughts brings about disturbance in shareera dosa. Acharya Charaka states that 'Na

hi karma mahat hi kinchit phalam yasya na bhunjyate' Every karma is bound with phala no matter how mahat the karma is. In this instance it is important to understand the innate karmas of mind which includes Chintyam, Vicharyam, Oohyam, Dheyam, Sankalpam. Thoughts are the innate function of mind and this makes mind selfwandering in nature. Bhagavatgeeta describes mind as Chanchala and everwandering, to restrict and control mind is considered as difficult as controlling wind or vayu. Manas is the only entity which possess self control powers. 'Mano hi anista visayam prasritam manaseva niyamyate'. This karma of manas is the most important one when it comes to its therapeutic aspect.

Concept of Psychological and Physical Immune Mechanism

Immune Mechanism (Vyadhikshamatwa) is a comprehensive phenomenon which includes both body and mind. Nidanas are bound to bring about vitiation of shareera dosha and mano dosas, despite of this fact not all dosa vitiation brings about disease or vyadhi manifestation. This depends on the status of ones Immune mechanism. Allergens or pathogens presented to the body are popularly known as Antigen. Immune mechanism present at physical level combat with the allergens to restore its healthy condition. In case pathogens overpower the immune mechanism may produce manifestation ranging from mild hypersensitivity, autoimmunity to severe immunodeficiency. Thus Allergy is a physical response which may be conditioned by proper food, physical exercise and physical hygiene. The same is applicable at the Psychological level also. Several unpleasant and distressing events are encountered by the mind on a regular basis which are termed as Stressors. The Psychological Immune Mechanism enters in regular conflict with stressors to maintain the Psychological balance state. Instances where stressors overpower psychological immune mechanism produces Psychosomatic Disorders, Neurosis to Psychosis.

Even though both Immune Mechanism coexist they are not discrete, there are ample evidences of one being influenced by the conditioning of other. 'shareera manso parasparam anubrajet taptaajya ghatayor eva' Stressor at psychological level may influence the biological functioning and viceversa. At this instance one must understand that at times Psychological Immune mechanism may overpower the physical one. It may reduce or increase the strength of the physical disease presentation, May delay or progress the disease, May interfere in the prognosis of the physical disease. Examples include concept of 'Guru

vyadhi laghu vyadhi, Visadam roga vardhananam shrestam, Soumanasyam Garbha karanaam' etc.

Western concept of Psyche comprises of three states namely Conscious, Subconscious and the Unconscious one. The conscious is the active state of mind which tackles the conflicts or stressors presented before it. Subconscious state is the struggling one which always fluctuates between the Conscious and the Unconscious one. The Unconscious one forms the major part of the psyche and is the store house of all deep buried events or stressors which one may not be aware at all. They are preserved in their original form in the Unconscious mind and precipitate outward when gets an opportunity. Stressors are encountered on a regular affair by the mind and not all are capable of producing disorder.

Psychopathogenesis

Basic Psychopathological agents comprises of Asatmendriyartha samyoga, Pragyaparadha and Parinaama.

Asatmendriya samyoga of manas includes Manaso mano buddhi cha atiheenamithya yoga. Atiyoga of manas is characterized by Chintana and dhyanadi, Heena yoga by Achintanam, Mithya yoga by Bhayanaka chintanam.

Pragyaparadha refers to Aparadha of Pragya comprising of Dhee Dhriti Smriti. Man is bound to get Raagadi (dwesha, kama, krodha, lobha etc.). By Aparadha of mind one looses self control and ends in excessive Raagadi resulting in Rogaadi. This is known as Manoaparadha.

Parinaama refers to Sampraptir Kaala Karmaanam, Kala samprapti refers to conditions which occurs under the influence of kaala which is not under ones control this includes chaya prokapa prasamana of dosas, swabhavika roga and kaala janya rogas. Karma samprapti refers to Daiva and Purusha, Daiva refers to poorvajanma krita karmas and Purusha refers to present janma karmas.

Psychological Disorder (Raagadi Roga)

Uncontrolled Raagadi over the time gets converted to Roga by releasing tremendous amount of negative energy in the body. This deranges the Manodoshas and produces Raagadi roga by bringing vibhramsha of Dhee Dhriti and Smriti. The condition of such individuals will be similar to Nasta Sarathi vat ratah: and suffers from Unmada like Roga. Raagadi releases immense negative energy in the body which can decline, impair, or breakdown body systems. Raagadi

makes Prana in a stressed state and brings about breakdown of basic body systems. It also interferes in sleep mechanism.

Psychological Immune Balancer

The normal Psychological Immune balance is brought about by three prime agents namely Ahara, Nidra and Sadvritta. Ahara one among the Trayo Upastambha is the basic element which does mana poshana. According to Upanishads Manas is nothing but resultant of food taken (Annamayam hi soumyam manah). Bhagavatgeeta explains three different types of food namely Satvika ahara, Rajasika ahara and Tamasika ahara which shows the influence of food on mind.

Nidra is the best restorer of energy. When Manas becomes Klanta due to exertion nidra helps restore body back to normalcy. Nidra produces Prasannata of manas and nidranasa produces Manovibhrama.

Sadvritta includes code of conducts for physical and mental purity. It is of great relevance since regular practice of sadvritta enhances satwa guna of mind and helps to restore psychological balance. Deeper analysis of sadvritta gives clear indication of improving positive energy by limiting or restricting negative emotions, Na dukha sheelopachara, Na sarwa visrambhi, Na sarwa abhisangi, Na sarva kaala vichari, raaga dwesha hetunaam hanta cha, Na sokam anuvaseet, Sarvada prakritim abhikshanam smaret.

Psychotherapeutic Measures

Therapeutic measures include wide range of management from faith to medicaments. Daivavyapasraya, Yuktivyapasraya and Satwaavajaya are the therapeutic measures. Daivavyapasraya includes faith healing where in faith has power to strengthen the mind. Surrendering oneself to the supreme is one way of giving strong suggestion to the subconscious mind by repeated affirmation. The positive energy created by faith will compel the body to fulfill the same. More over there is an inborn tendency of the mind and body to restore to the normal healthy state.

Satwaavajaya includes various techniques to normalize the vitiated manodosas. The basic definition of satwaavajaya is to tame and regulate manas from wandering to ahita arthas. This can be brought about by yoga – chitta vritti nirodha, Meditation – channelising energy, Praanayama – control of breath –Mano nathastu maaruta and dhee dhariya aatmadi vigyanam manodosa oushadham

param. Pranayaama helps to control the mind by balancing prana. Just like Yogasanas help in balancing physical body, Pranayama helps to regulate mins as prana is the controller of mind.

This also includes use of Paraspara pratidwandi chikitsa, Praana bhaya – Tarjana, Taadana, Replacement therapy, Tadarthakaari chikitsa, Saantwana, Ashwasana etc.

Yuktivyapasraya chikitsa includes internal medications, panchakarma therapy and Bahya oushada prayogas depending on the dosabala and rogibala. Neurotic disorders may require mild sodhana, vatanulomana, bahya chikitsa, and samana aushada sevana. The general prognosis of neurotic disorders are Sadhya with combination of both oushada and satwavajaya.

Psychotic disorders on the other hand requires teekshana sodhana, Bahya and abhyantara oushada sevana. Shodana chikitsa helps to regulate Mano dosas by 'tathasya sudha dehasya prasadam labhate manah'. Phalasruti of Panchakarma mentions "hrid indriya sirah koshthe samsudhe vamanadibhih Manahprasadam apnoti smrtim sanjnam ca vindati"

Vamana

Usually used in Utklista kapha conditions with drugs like Madanaphala, Vacha, Yasti, Madhu, and Saidhava.

Virechana

Usually used formulations include Avipathi choornam - 1 karsha matra

Brahmi gritam with kalyanaka ksharam

Samskrit eranda tailam

Kalyanaka gulam

Manibhadra gulam

Vasti (Nirooha)

Yasti kashaya with kalka of Vacha, Rasna, Hingu, Devadaru & Satapuspa or Erandamooladi kashaya vasti as kaala/yoga vasti

Anuvasana Vasti

Aanuvasana with medicated gritas acc. to avasta like Kalyanaka grita, Panchagavya grita, Kooshmanda swarasa grita etc. can be used.

Nasya

Kalka nasyam with Vacha, Hingu, Daruharidra etc. can be used

Apart from the above drugs, formulations used for nasya includes :-Sankhapuspee kalka

Vilwadi gulika

Sireesabeejadi gulika

Brahmyadi varti

Maastishkya Proyoga

Shiro Abhyanga can be carried out with Chandanadi taila, Valiya chandanadi taila, Bala taila, Lakshadi tailam etc.

Shiro Pichu/Shiro Lepa- Talapotichil with Amalaki choorna+ yasti choorna+ Musta+Takra

Talam- Kachooradi choorna, Panchagandha choorna+ Ksheerabala taialm Shiro Dhara with Dhanwantaram taialm, Ksheerabala tailam

Dhoopana

Kusta, Vacha, Jadamanchi, and Hingu are generally used.

Samanoushadhis

Aswagandha, Yastiamdhu, Vacha, Kusta, Sankhapuspi, Mandookaparni, Brahmi, Jatamansi, Sarpagandha, Satavari, Tagara, Jyotismati, Hingu, koosmanda etc is used based on condition as single drug or in combination.

Conclusion

The threefold therapy involving Daivavyapasraya, Yuktivyapasraya and Satwaavajaya represents the three category of approach for the cure of pathological condition involving the body and mind. Daivavyapasraya is more or less empirical in as much it revolves around faith and Adrista (unseen) influences. Yuktivyapasraya on the other hand is more of rational nature as it involves reasoning and the use of rational faculties. Satwaavajaya however is a mix of rational and empirical procedures though it tends to be more rational than empirical. Though all these three approaches are applied in psychological illness.

CHAPTER 13

Utility of Mutra Pareeksha in Clinical Practices

Prof. Manjula Karlwad¹, Dr. Nitin Sharma²

- ¹ Department of Kayachikitsa, Shri Jagadguru Gavisiddeshwar Ayurvedic Medical College and Hospital Koppal, Karnataka.
- ² Department of Kayachikitsa, S.R.M Government Ayurvedic College and Hospital, Bareilly, U.P.

DEFINITION OF URINE

ACCORDING TO MODERN

Urine is a liquid by product of metabolism in humans which is excreted from the body through the urethra.

ACCORDING TO AYURVEDA

Mutra is the ahara mala which is produced as a result of Ahara Parinama.

Function attributed to Mutra is Kledavahana. That is to remove the excess of kledata.

Mutra is considered as Mala as it has got the property of Maleenikarana. Both healthy as well as diseased state of the body is reflected by Prakruta and Vaikruta Mutra.

PROPERTIES OF NORMAL URINE

- QUANTITY- Normal quantity passed in 24 hours is about 1500cc generally voided during the day or at the most, the normal ratio of day urine to night is 4:1.
- Ph-normally urine is slightly acidic to litmus due to presence of acid sodium phosphate. It becomes alkaline on standing due to decomposition (conversion of acid phosphate into alkaline phosphate).
- Colour- pale yellow or amber

- Odour- mildly aromatic due to presence of volatile fatty acids.
- Specific gravity-1.005-1.030
- Urine is Natigandhi, i.e., an odor which is not irritating (Ka. Su. 28)
- Ghanatwa -Normal urine is Drava, Sara ,and Laghu (Ch. Sh. 7/94).

Normal constituents of the urine

• Total solids excreted in normal urine per day is about 50gms of which 20gms are voided as inorganic and about 30 gms as organic constituents.

A. Inorganic	constituents:	Output per day	
1. Chlorides		10-12 gms	
2. Phosphate	es	2-3gms	
3. Sulphates		1.5-2gms	
4. Oxalates		0.015gms	
5. Sodium		4gms	
6. Potassium	1	2gms	
7. Calcium		0.2gms	
8. Other min	erals	In traces	
B . Organic co	onstituents:	Output per day	
1. Urea		25gms	
2. Ammonia		1gms	
3. Uric acid		0.5gms	
4. Creatinine	•	1.5gms	
5. Purine boo	dies	1-2gms	

Clinical examination of urine

According to modern

- Interrogation
- Physical examination
- Chemical analysis

According to ayurveda

- · Prashna Pariksha
- · Darshana pariksha
- Sparshana pariksha

INTERROGATION/ PRASHNA PARIKSHA

According to modern

A. Interrogation- particularly inquire into family history, personal history, past history.

B. Symptoms

- 1. Hematuria
- 2. Polyuria
- 3. Oliguria
- 4. Dysuria
- 5. Frequency
- 6. Incontinence
- 7. Pain

According to Ayurveda

A. Prashna Pariksha-mutrayaha srotodusti karanas

- 1. Mootrita udaka bhakshya stree sevanaat
- 2. Mutra nigrahaat
- 3. Ksheena
- 4. Abhikshata

B. Mutravah srotodusti laxanas-

- 1 Ati srushtam
- 2. Ati baddham
- 3. Prakupitam
- 4. Alpam alpam
- 5 Bahalam
- 6 Sashulam

COLLECTION OF URINE

According to modern

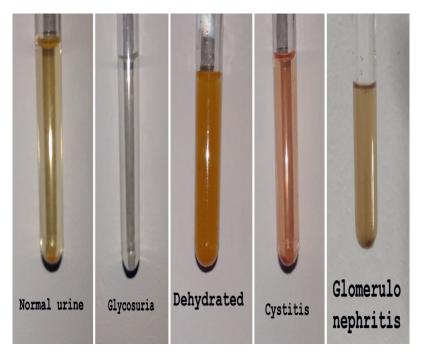
- Males- urine passed into clean glass vessel is sufficient for ordinary tests.
- Female- a catheter specimen is preferable to exclude contamination from vaginal discharge.
- For diabetes- a 3hour post-prandial urine is desirable.
- In nephritis- a morning specimen should be examined.

According to ayurveda

- Time of Urine Collection: All texts have stated that urine collection should be done in the morning while Yogaratnakara and Vangasena have specified that the time should be when four Ghatikas are left in the last Yama of the night. This period on calculation comes to be about 1 h 36 min before sunrise
- Patra for Urine Collection: Various Patras have been described for urine collection by the texts as glass or bronze Supatra and Shveta Kachamaye Patra. Urine after collection has to be properly covered with a cloth.
- Collection of Midstream Urine: Midstream urine has to be collected for examination discarding the first and the last part.

Physical examination of urine according to modern

- Alteration in the color of urine:
 - 1 Pale
 - 2. High colored
 - 3. Yellowish
 - 4. Yellowish- green
 - 5. Reddish smoky or brownish
 - 6. Pinkish
 - 7. Orange
 - 8. Port wine
 - 9. Greenish
 - 10 Blackish
 - 11. Cloudy
 - 12. Milky
 - 13. Opalescent
 - 14. Blue
 - 15. Normal when voided but darkens on standing.



Darshana pariksha of mutra

Mutra Chakshu Pariksha: Mutra varna pariksha for Dosha and doshaprakopa:

Dosha prabhava on mutra	Mutra varnadi guna
Vata dosha	Pandur varna
Pitta dosa	Rakta varna
Kapha dosa	safen
Vata prakopa	Nilam, ruksha
Pitta prokapa	Pita,aruna,tailasam
Kapha prakopa	Snigdha, kamal jal tulya
Rakta prakopa	Ushna, rakta varna
Pitta-vata prakopa ushna.	Dhumjalbh(dhum-mishrit jal sam)
Vata-kapha prakopa	Shweta, budbudabham
Kapha-pitta prakopa	Rakta, avilata
sannipataja	Mishra varna, jeernajwara sadrush pitam.

Mutra	Chakshu	Pariksha:	Mutra	varna	Pariksha	in	different	vyadhi:
-------	---------	-----------	-------	-------	----------	----	-----------	---------

Mutra rupa	Vyadhi
Avila mutra	Prameha
Anavil mutra	Prameha nivriti
Accham mutra	Udakameha
Sikta in mutra	Sikta meha
Sandrata in mutra	Sandrameha
Bhasmodaka pratikash	Mutrashukra, mutraghata
Shankh churnavat/gorochanvat	Mutrasada, mutraghata

Physical examination of urine according to modern:

- Consistency generally transparent with no deposits.
- If cloudy, it may be due to presence of mucus, pus, bacteria, oxalates, urates or alkaline phosphates. If the turbidity has a pinkish color, it is due to salts of uric acid.
- Odour –mildly aromatic due to presence of volatile fatty acids. On standing the urine is decomposed and has an ammoniacal smell. A cloudy urine with an ammoniacal smell suggests pyelitis or cystitis. In ketosis the urine may have the smell of rotten apples due to the presence of actone.

Mutra Gandha Pariksha

- This can be altered in various disease condition. Nighandha mutra is present in udakameha [Ashtanghridyam, Nidansthanm, Chap 10 Verse 8-16].
- Vidgandha mutra is found in Vidvighata Mutraghata [Madhavkara's Madhav Nidanam, Chap 31, Verse 19-20] .
- Madhugandh mutra is present in madhumeha.
- Amragandha mutra also found in manjishta meha.
- Rasana Pariksha of mutra:
- In context to the prameh Acharya charaka has described that mutre abhidhavantati pipilikasca i.e. crawling of ants towards the urine due to presence of sharkara in mutra.

[Ashtanghridyam, Nidan Chap 10, Verse 39].

• Amla rasa mutra in Amla meha, kshararasa in kshara meha

[Ashtanghridyam Nidan 10/14].

- Madhur rasa in madhumeha and ikshumeha are the diagnostic features of the respective prameha.
- With help of modern urine chemical examination the rasa of the mutra can be identified by the anumana praman.
- By urine glucose test we can confirm the madhur rasa, like wise amla rasa and kshara rasa of the mutra can be indentify by the testing the Ph of the urine. If ph less than 7 then it is amla rasa or if the ph of the urine is found more than 7 then it is kshara rasa can be confirmed.

CHEMICAL ANALYSIS OF URINE WITH INTERPRETATION

- Chlorides- chief inorganic constituent of norml urine. Daily excretion 10-12gms.
- · Diminished in-
- > Fevers
- Vomiting
- Severe diarrhoea
- > Excessive sweating
- During diuretic therapy
- Cushing's syndrome
- > Primary aldosteronism
- > Chronic nephritis.

Phosphates- found in alkaline urine as a cloudy precipitate.

- > Daily excretion is about 2gms.
- > They are found in excess in vegetarians.
- > Increased in nervous diseases.
- > Considerably diminished in renal disorders.
- Fresh urine contains deposits of phosphates indicates an infection of urinary tract.

Sulphates- daily excretion is 2gms.

- > Increased in fevers in general.
- > Increased in conditions where there is increased protein metabolism.

Oxalates- daily excretion 0.015gms.

- > Increased on taking certain vegetables such as cabbage, spinach and rhubarb.
- ➤ Best seen under microscope as envelope like crystals and also as dumb bells.

Organic constituents of the urine are mostly nitrogenous substances whose total output is 30gms/day of which 85% is voided in form of urea.

Urea- daily excretion 25gms.

- ➤ Increased in excessive protein intake, fevers, diabetes, convalescence, phosphorus and arsenical poisoning.
- > Diminished in starvation, CKD, Liver destruction.

Ammonia- daily excretion-1gm

- ➤ Increased in ketosis, such as in advanced diabetes.
- > Delayed chloroform poisoning.
- ➤ In severe vomiting of pregnancy.
- In those conditions where there is failure to synthesis urea in the body as in liver cirrhosis

Uric acid- daily excretion 0.5gms

- > Excess in urinary passages may lead to gravel/stone formation.
- Increased by intake of food containing nucleo-proteins.
- ➤ Increased whenever a large destruction of nucleins is going on in the body as in myeloid leukemia, acute fevers, resolving pneumonia, acute yellow atrophy and other acute destructive diseases of liver.
- ➤ Increased during X-RAY treatment, after attack of gout.
- > Diminished during an attack of gout and during quinine administration.

Creatinine- daily output 1.5gms.

- > Increased in pneumonia, typhoid and tetanus.
- ➤ Decreased in anemia, leukemia, thyrotoxicosis, advanced degeneration of the kidneys and liver, muscular atrophy.

Purine bodies- daily out put 1-2gms

Increased just as uric acid- in conditions associated with increased destruction of nucleins as in leukaemia etc.

- Abnormal constituents-
- 1. Proteins- Bence-Jone's proteins are found in myeloma, leukemia, osteomalacia, nephritis with high BP and oedema.
- 2. Sugar- DM
- 3. Acetone in diabetic patients a progressive increase in acetone is a grave prognostic sign. Also present in starvation, toxaemic vomiting of pregnancy, high ketogenic diet and chloroform poisoning.
- 4. Aceto- Acetic acid- typically present in diabetes along with acetone.
- 5. Blood-
- 6. Bile pigments- obstructive or infective jaundice.
- 7. Bile acid-
- 8. Indican increased in intestinal obstruction, cholera, typhoid, lack of bile in the intestine, conditions like intestinal putrefaction.
- 9. Chyle –parasitic infection wuchereria bancrofti.
- 10. Pus –bacterial urinary tract infection, sepsis, older people with pneumonia.
- 11. Urobilin toxic necrosis of liver, hemolytic and pernicious anemia, nearly absent in obstructive jaundice.
 - Microscopic urine examination- use sediment after centrifuging the urine.
 - 1. RBC- Signifies hematuria
- 2. WBC- pyelitis, cystitis, urethritis and non- catheter specimen in female.
- 3. Epithelial cells- not much significant, coming from bladder.
- 4. Cast –significant of renal disease.
 - a. Epithelial casts- chronic inflammation of the prostate, toxemias, poisoning by heavy metals and in amyloid disease.
 - b. Blood cast- typically present in acute nephritis.
 - c. Granular casts- commonly present in sub acute and chronic parenchymatous nephritis.
 - d. Hyaline casts- present in normal urine. Frequently seen in chronic nephritis, nephrosis, congestive heart failure, eclampsia, dehydration and diabetic coma.

- e. Fatty casts- sclerotic diseases of the kidney and nephrosis.
- f. Waxy casts- amyloid disease of the kidney, advanced stages of glomerulonephritis and myelomas.
- 5. Bacteria.
- 6. Ova and parasites.
- 7. Crystals.
 - a. Uric acid-reddish brown in appearance. Their presence suggests a stone in urinary tract or abnormal uric acid metabolism as in gout.
 - b. Urates brick coloured. Found in urine during fever.
 - c. Phosphates present only in alkaline urine. Found in excess in neurasthenia, osteitis fibrosa and in disorders that give rise to alkalosis.
 - d. Oxalates excess intake of veggies like tomato, spinach etc, presence in fresh urine indicates calculi
 - e. Carbonates calculi

SPARSHANA PARIKSHA

Freshly collected Mutra should be examine by thermometer to know the Ushana/sheet Sparsha of mutra.

In sheet Meha and Udak Meha the freshly collected urine temperature is comparatively less.

Acharya Yogaratnakar have described a specialized, scientific and systematic method of examination mutra which have a great prognostic value in Ayurveda.

TAILA BINDU PAREEKSHA

Mutra pariksha vidhi should be carried out after the sunrise in a natural light on a vidhivata collected urine sample. Mutra should be taken in a kanch patra(glass dish) or kansya patra(bronz dish) or mrutta patra (earthan dish) in a sufficient amount. A drop of tila taila is dropped in mutra with the help of trina kashta on the surface of the urine. Then the movement and the behavior of the taila bindu is observe.

By spreading nature of the oil

• If inserted oil spreads quickly over the surface of urine, that disease is Sadhya (curable).

- If the oil does not spread it is considered as Kashta sadhya (difficult to treat).
- If the dropped oil directly goes inside the urine and touches the bottom of the vessel, then it is regarded as Asadhya (incurable).
- In another text, it is mentioned that if the oil does not spread and remains as a droplet in the middle of the urine the disease is considered incurable.

Picture: Quick spread of Taila bindu.

If inserted oil spreads quickly over the surface of urine, that disease is *Sadhya* (curable).



- If the oil spreads in the direction of Purva (east) then the patient gets relief from the disease.
- If the oil spreads in the south direction, the individual will suffer from jwara (fever) and gradually recovers.
- If the oil spreads in the northern direction, the patient will definitely be cured and become healthy.
- If the oil spreads towards the west, he will attain Sukha (happy) and Arogya (healthy).
- If the oil spreads towards the Ishanya (Northeast), the patient is bound to die in a month's time.
- If the oil spreads in the direction of Purva (east) then the patient gets relief from the disease.
- If the oil spreads in the south direction, the individual will suffer from jwara (fever) and gradually recovers.

- If the oil spreads in the northern direction, the patient will definitely be cured and become healthy.
- If the oil spreads towards the west, he will attain Sukha (happy) and Arogya (healthy).
- If the oil spreads towards the Ishanya (Northeast), the patient is bound to die in a month's time.

Picture: North West movement of *Taila Bindu*If the oil spreads on to *Vayavya* (Northwest) direction, he is going to die any way.



- It is a good prognosis if the oil creates the images of Hamsa (swan), Kamala (lotus), Chamara (chowri composed of the tail of Yak). Torana (arch), Parvata (mountain) elephant, camel, tree, umbrella and house.
- If the Taila attains the shape of a fish, then the patient is free of dosha and the disease can be treated easily.
- If the drop of the Taila attains the shape of Valli (creeper), Mrudanga (a kind of drum), Manushya (human being), Bhanda (pot), Chakra (wheel) or Mriga (deer) then the disease is considered as the Kashtasadhya (difficultly curable).
- If the spreading oil creates the shapes of tortoise, buffalo, honeybee, bird, headless human body, Astra (instrument used in surgery, like knife etc), Khanda (piece of body material) physician should not treat that patient as that disease is incurable.

- If the shape of the drop of Taila is seen as fourlegged, threelegged, twolegged that patient will die soon.
- If the shape of the drop of Taila is seen in the shape of Shastra (sharp instruments), Khadga (sword), Dhanus (bow), Trishulam (type of weapon with three sharp edges), Musalayudham (pestle), Shrugala (jackal), Sarpa (snake), Vrishchika (scorpion), Mushika (rat), Marjara (cat), arrow, Vyaghra (tiger), Markata (monkey) or Simha (lion), then it is understood that the patient will die soon.
- The main determinant of urine surface tension is bile salt concentration. Presence of bile salts in urine will lower the surface tension. As Bile is an emulsifying agent it helps insoluble fat to slowly mix with water till it becomes a homogenous mixture. This is the reason, why oil produces different shapes on the surface of urine.

Picture: Chalinivat



Picture: Shrugala (jackal)



Dosha involvement based on Shape of Bindu

- The shape of Bindu resembles Sarpakara (snake shape) in Vataja Vikara.
- Chatrakara (umbrella) in Pitta.
- Mukta (pearl shape) in Kaphaja Vikara.

Picture: Chamara



Due to the change in the constituents of urine sample there may be variations in movement, shape of Taila. Hypothesis made in order to explain the basis of procedure & reason for Taila to show such variations in Mutra are as follows.

Collection of Urine

First passed early morning urine sample in empty stomach is collected as this urine will be concentrated. During day time due to consumption of fluids & food, urine may get diluted and may give false picture about the subjects health. To avoid the contamination by discharges & other particles Madhyadhara(Mid stream) of Mutra is selected.

As it causes the deterioration of chemical & cellular components like decrease in glucose levels due to bacterial growth, lysis of red blood cells, decomposition of casts, alkalinity increases as conversion of urea to ammonia by action of bacteria, much gap should not be given between the collection & examination of urine. As the examination requires adequate light, so it is mentioned to perform it after the sunrise.

Selection of Trina & Taila

Selection of Trina is just to make a minimal quantity of Taila Bindu. As there were no availability of dropper or micropipettes. Scientifically we can explain the selection of Taila here, as density of Taila is lesser than urine which has a composition of 93-97% of water, organic compound & dissolved ions. Further there is an interface tension between the dissimilar liquids and since they are non polar molecules the decrease in miscibility will increase the interface thickness. This will help Taila to produce various changes on the surface of urine.

Chikitsa of Mutra Vaha Strotas Vyadhi

A. Single Formulations

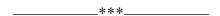
Sl No	Aushadaha kalpana	AUSHADHA KALPANA	MATRA	ANUPANA	REFERANCE
1	Gokshura bija- churna	churna	3gms BD	HONEY	N.A PART-1 PAGE 212
2	KULATTHA	CHURNA	3gms BD	TAKRA	A.S SU.7
3	VARUNA MULA KWATHA	KWATHA	30ML BD	WATER	N.A PART-1 PAGE 96

B. Compound Formulations

Sl. No	Aushadaha kalpana	AUSHADHA KALPANA	MATRA	ANUPANA	REFERANCE
1	GOKSHURADI GUGGULU	VATI	500MG BD	WATER MILK	AFI, PART-1 5.3
2	CHANDRA PRA- BHA VATI	VATI	500MG BD	WATER	S.S MA.K 7 TH CHAPTER
3	VARUNADI KWATHA	KWATHA	KWATHA	30ML BD	C.D 34/29
4	SWETA PARPATI	PARPATI	250MG BD	BUTTER MILK	S.Y.S ASMARI MUTRAKRICHRA ADHIKARA

PATHYAPATHYA (DO'S AND DONTS)

	PATHYA (DO'S)	APATHYA (DON'TS)
CEREALS	OLD RICE, BARLEY	-
PULSES	KULATTHA,GREEN GRAM(MUDGA)	BLACK GRAM
FRUITS AND VEGETABLES	WHITE GOURD MELON(KUSHMANDA) GINGER(ADRAKA), LEAFY VEGETABLES,DRUM STICK(SIGRU)	BRINJAL,TOMATO,SPINACH
OTHERS	-	INCOMPATIBLE, ACIDIC, CONSTIPATING, HEAVY AND DISTENDING ITEMS OF FOOD
LIFE STYLE	UNCTION, SUDATION, THERAPEUTIC EMESIS(VAMANA), THERAPEUTIC PURGATION(VIRECHANA), THERAPEUTIC ENEMA(VASTI)	SUPPRESSION OF NATURAL URGES,LACK OF EXERCISE.



CHAPTER 14

Gambhir Vatarakta [Ankylosing Spondylitis]

Dr Raja Singla¹, Dr Shubhi Sharma²

 MD Ayurveda, Associate Professor, Institute for Ayurvedic Studies and Research, SKAU, Kurukshetra. Ex In-charge State Drug Testing Lab (Govt. of Haryana).
 PG scholar, Institute for Ayurvedic Studies and Research, SKAU, Kurukshetra.

1. INTRODUCTION

Ankylosing spondylitis (AS) is a manifestation of chronic inflammatory arthritis that initially affects the sacroiliac joints and spine, which may result in bony fusion of the spine. The disease is most commonly marked by tenacious back pain and intensifying stiffness in the spine. AS typically begins between the second and third decades of life. In Asia, its prevalence is mainly 16 to 17 people per 10,000, with a male-to-female ratio of about 3:1.

Seronegative spondyloarthropathies (SPA's):

A group of musculoskeletal disorders that possess certain clinical features and genetic association.

- RA factor negative
- Association with HLA-B27
- Immune-mediated manifestations

Five subgroups of SPA's include:

- i. Ankylosing spondylitis
- ii. Psoriatic arthritis.
- iii Reactive arthritis
- iv. Enteropathic arthritis (extra-intestinal manifestations of IBD)
- v. Undifferentiated spondyloarthritis

ETIOPATHOGENESIS

- AS arises from an interaction between environmental pathogen and host immune system.
- Bacterial components breach the mucosal barrier, triggering the activation of macrophages and dendritic cells in the intestinal submucosa
- These immune cells produce elevated levels of Interleukin 23 (IL-23), which stimulates T-cells, neutrophils, and mast cells to produce Interleukin 17 (IL-17).
- IL-17 plays a key role in promoting inflammation, leading to sacroiliitis and enthesitis.
- Activated T-cells also produce Interleukin 22 (IL-22), which is involved in the formation of new bone (bony spurs)

CLINICAL FEATURES

- The key symptoms of Ankylosing Spondylitis are inflammatory lower back pain that radiates to the buttocks and posterior thighs, accompanied by morning stiffness. The discomfort tends to worsen with inactivity and is alleviated by movement.
- Physical examination typically announces a reduced range of motion in all directions of the lumbar spine, along with pain when tightening the sacroiliac joints.
- Ankylosing Spondylitis progresses slowly, with fluctuating symptoms, and many patients develop ankylosis (vertebral fusion) over time.
- Extra-articular features include fatigue, anemia, anterior uveitis (25% of cases), prostatitis (80% of men), sterile urethritis, inflammatory bowel disease (IBD lesions present in up to 50% of patients), osteoporosis, amyloidosis (rare), and cardiovascular conditions such as aortic valve disease (20%).

DIAGNOSTIC CRITERIA

According to the Modified New York criteria from 1984, a diagnosis of ankylosing spondylitis (AS) can be built when there is evidence of -

• Sacroiliitis on X-rays (either grade II on both sides or grade III on one side)

- Chronic inflammatory low back pain refine by movement, not relieved by rest.
- Restriction of lumbar spine movement in sagittal and frontal planes.
- Chest expansion compressed.

This can also be diagnosed with the help of BASFI (Bath Ankylosing Spondylitis Functional Index) criteria.

DIAGNOSIS:

The Diagnosis of Ankylosing Spondylitis is established through a combination of clinical evaluation, laboratory tests and radiological findings.

• Physical Examination:

1. Schober's Test:

Purpose: Evaluate forward flexibility of the lumbar spine.

Method:

- a) The patient stands upright, and the physician marks a point at the midline between the posterior iliac spines.
- b) A second mark is made 10 cm above the primary mark.
- c) The patient bends forward without bending the knees, and the distance between the two marks is measured.
- d) An increase of 5 cm or more in distance indicates a negative test.

2. Gaenslen's Test:

Purpose: Assesses stress on the sacroiliac joint, a key indicator of early ankylosing spondylitis.

Method:

- a) The patient lies supine with the symptomatic leg off the edge of the treatment table.
- b) The examiner flexes the non-symptomatic hip to 90 degrees while stabilizing the pelvis, and the patient holds the non-tested leg.
- c) The examiner applies passive pressure to hyperextend the symptomatic leg.
- d) Downward force is applied to the symptomatic leg, while a counterforce pushes the non-symptomatic leg upward, creating pelvic torque. The test is positive if pain reproduce.

3. Faber's Test (Patrick's Test):

Purpose: Evaluate for sacroiliac dysfunction or hip pathology.

Method:

- 1. The patient lies supine.
- 2. The tested leg is passively flexed, abducted, and externally rotated, resting on the opposite leg.
- 3. The examiner gently pushes the tested leg in the direction of table.
- 4. A positive test is suggested by pain in the sacroiliac joint or anterior hip region.

4. Straight Leg Raising (SLR) Test:

Purpose: Evaluates for prolapsed intervertebral disc.

Method:

- 1. The patient lies supine.
- 2. The examiner raises the extended leg until the patient reports pain.
- 3. Dorsiflexion of the foot can be applied to further stretch the sciatic nerve (Bragard's test).
- 4. A positive test occurs if pain is reported at an angle of up to 60 degrees.

5. Lasegue Sign:

Purpose: Assesses prolapsed intervertebral disc, sciatic nerve irritation, or hamstring tightness.

Method:

- 1. The patient lies supine.
- 2. The hip and knee are flexed to 90 degrees.
- 3. The examiner passively extends the knee.
- 4. A positive result is indicated by radicular pain or stiffness in the hip region.

6. Pump Handle Test

Purpose: Assesses sacroiliac joint pain.

Method:

1. The patient lies supine.

- 2. The examiner flexes the knee and hip toward the chest, aiming for the opposite shoulder.
- 3. A positive result is indicated by pain on the opposite side of the hip.

7. Chest Expansion Test:

Purpose: Evaluates thoracic spine involvement in ankylosing spondylitis and chest expansion capacity.

Method:

- 1. The patient places hands behind their head.
- 2. The examiner wraps a tape measure around the chest at the xiphisternum level
- 3. The patient is instructed to inhale maximally while the tape is tightened.
- 4. A normal result shows an increase in chest expansion of 5 cm or more upon exhalation.

8. Flesche Test (Occiput to Wall Distance):

Purpose: Assesses cervical spine flexion deformity due to ankylosing spondylitis.

Method:

- 1. The patient stands upright against the wall, with heels and buttocks touching
- 2. The patient is asked to extend the neck to touch the occiput to the wall.
- 3. The Space between the occiput and the wall is measured.
- 4. A normal result shows zero distance, indicating no cervical spine flexion deformity.

Investigation:

- 1. HLA-B27-positive (in 90% of cases)
- 2. ESR raised
- 3. CRP raised
- 4. RA factor negative
- 5. CBC (sometimes anaemia due to inflammation) and Leucocytosis.
- 6. Sr. Alkaline phosphatase (elevated if severe disease)
- 7. Spirometry for Lung capacity

Radiological Findings:

- 1. SI joints
- a) Symmetrical and bilateral sacroiliitis
- b) Sclerosis and erosion changes
- c) Inflammatory changes and widening of SI joint
- 2. Spine:
- a) Squaring of Vertebral Bodies
- b) Shiny Corner Sign
- c) Syndesmophytes
- d) Ossification
- e) Bamboo Spine
- f) Dagger Sign- Single radio-dense central line seen in ankylosing spondylitis due to ossification of supraspinous and interspinous ligaments.
- g) Trolley Track Sign It is a combination of two lateral radio-dense lines of fused apophyseal joint and a single central dense line of ossified supraspinous and interspinous ligaments.

Differential Diagnosis:

- a. Degenerative Disc Disease
- b. Spinal stenosis
- c. Reactive Arthritis
- d. DISH (Diffused idiopathic skeletal Hyperostosis)
- e. Rheumatoid arthritis
- f. Reiter's syndrome

Ayurveda correlation Gambhir Vatarakta:

The Pathogenesis and symptoms of Ankylosing Spondylitis can be correlated with Kati-Prishtha-Trik grah of Gambhir Vatarakta.

In Ayurveda, Grah (stiffness) is a characteristic feature of Vata and Kapha dosha. Hence, In the treatment of kati-prishtha-trik grah in Gambhir vatarakta (Ankylosing spondylitis) primary concern should be effective treatment of Kapha and Vata dosha.

Lakshan of Gambhir vatarakta:

- a) Svayathu, Stabdta Swelling and stiffness
- b) Kathinya- Limitation of joint movement
- c) Arti- Deep pain
- d) Shyavata Black discoloration
- e) Tamra Twaka Coppery discoloration of skin
- f) Daha-Burning sensation
- g) Toda Pricking sensation
- h) Sphurana Throbbing sensation
- i) Paakavaan Suppuration

Samprapti ghataka:

Dosha – Vata Pradhan tridosha

Dushya - Rakta, Asthi, Majja

Srotasa - Rasavaha, Raktavaha, Asthivaha, Majjavaha

Srotodusti -Sanga

Adhishthan- Rakta, Asthi, Majja

Agni -Dhatwaagni

Sadhyasadhyata-Krichasadhya

Treatment Protocol:

- Gambhir Vatarakta Chikitsa
- Asthimajjagata Vata Chikitsa
- Kaphaavrita Vata Chikitsa
- Rasayana Chikitsa

The ayurvedic treatment for ankylosing spondylitis is very hard as its treatment has to change according to the condition and severity of the patient. The physician has to be very accurate during the pachana of ama and has to avoid the pachana of dhatu.

In the case of Aavaran (Kapha-aavrita vata) the treatment protocol is likely to be Pachan of Kapha with dravya having kapha ghana properties and Vata in samayastha.

Bhrihangan should be given according to condition of patient. So physician has keen observation on the patient that ama is not formed in the body due to excess Bhrihangan.

Complications:

If ankylosing spondylitis is not treated in initial stage and vitiated vata is not controlled, it will lead to degeneration of disc and clubbing of vertebrae like Dandka (bamboo) which is untreatable (asadhya).

Internal medication:

S.No.	MEDICATION	DOSE
1.	Kaishore Gugullu	2 TDS
2.	Giloy Satva	125mg BD
3.	Praval Pisthi	125mg BD
4.	Vatavidhwansana Ras	1 BD
5.	Guduchyadi Kashayam	15ml TDS

Panchkarma Treatment:

- Patra Potli Swedan
- Churna Pinda Swedan
- IR Swedan
- Dashmoola Kwath Dhara
- Nirgundi Kwath Dhara
- Dhanya Amla Dhara

• Anuvasana Basti:

- a. Saindhavaadi Tail
- b Bala Tail
- c. Sahcharadi Tail

• Niruha Basti:

- a Erandmoolaadi Niruha
- b. Guduchyadi Niruha
- c. Mustayadi Niruha
- d. Patolaadi Niruha

• Yapana Basti:

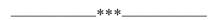
a) Panchtikta Ksheer Basti

CONCLUSION

The exact sign and symptoms of the Ankylosing spondylitis does not resemble with any particular disease in Ayurveda. However based on the clinical presentation of the disease, it can be correlated with classical symptoms of Gambhir Vatarakta.

Panchkarma procedures along with ayurvedic internal medication were used for the treatment of Ankylosing spondylitis.

A number of patients were administered with Guduchyadi niruha basti and Mustayadi basti on OPD & IPD level in Institute for Ayurvedic Studies and Research, SKAU, Kurukshetra and we got good result from this treatment.



KAYACHIKITSA SAMBHASA ABHILEKHAM COMPENDIUM OF CLINICAL WISDOM

ABOUT THE BOOK

Kayachikitsa Sambhasa Abhilekham, Compendium of Clinical Wisdom is a nectarean book which has come out of the churning discussions of Kayachikitsa Sambhasa. It contains chapters on the complex clinical conditions like Atayika Awastha, Pleeha and Yakrit Vikaras, Chronic Kidney Diseases, Cardiac Disorders, Vat Vyadhi, Metabolic Syndrome and Manas Roga etc. but the simplified language is the uniqueness of this book which makes it convenient for the scholars to digest the concepts of Ayurvedic Medicine very easily. This book will serve as a ready reckoner for undergraduate and postgraduate students, research scholars, academicians and Ayurveda practitioners who are interested to explore the insights of Kayachikitsa.

VISHWA AYURVEDA PARISHAD 1/231, Vikram Khand, Gomati Nagar, Lucknow

