UNDERSTANDING MALE INFERTILITY THROUGH CLINICAL EXPERIENCE – AN AYURVEDIC APPROACH

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Fertility is existential necessity and every living thing on the universe try to maintain their lineage by reproducing offspring. Problems of fertility are not new to the mankind. Spectrum of treatment options is available in ancient scriptures. For example birth of Rama and his brothers after putrakameshti yaga in Ramayana is best example of daivavyapashraya chikitsa. Similarly in Mahabharata we find examples for donar insemination (birth of Pandavas) and also very advanced technique of separation and incubation of totipotent cells so that each single cell becomes single viable foetus (birth of Kauravas). Interesting thing to note here is shifting of treatment options i.e. daivavyapashraya to technology during Ramayana to Mahabharata time. Further Vichitra virya was cloned from a somatic cell. Considering the magnitude and scope ayurveda maintained a speciality Vajikarana since ages. The speciality deals with problems of fertility, sexual dysfunctions and measures to obtain healthy offspring.

Though male factor contribute 40 to 60% of infertility there is inadequate awareness among males as well as exclusive specialists and clinics to deal the problems. In respect to fertility a male partner has to perform two distinct functions:

1. Production of healthy spermatozoa
2. Deposition of spermatozoa along with media high in the vagina. Hence a male partner may remain sub-fertile/infertile broadly due to

1. Defective spermatozoal production
2. Defective seminal plasma production
3. Failure to deposit semen high in vagina

In this context, causes and management of defective spermatozoa production and seminal plasma are dealt.

DEFECTIVE SPERMATOGENESIS: There are innumerable causes starting from chromosomal defects (bija dosa) upto old age (svabhavabala pravrtta), including congenital disorders (janmabala pravrtta), metabolic defects, etc. that interfere with spermatogenesis,

Dvireta (Disorders of Chromosomal Sex): A spectrum of disorders characterised to contain both male and female sexual characters (Ca Sa 2/18); or the disorders of sexual development resulting out of disordered sex chromosomes. These disorders occur due to the vitiation of *bijabhaga* of parents which are responsible for the creation of *bija* in the foetus (Ca Sa 2/18). Various conditions to consider under bijadosha are Klinefelter's Syndrome, XX Male Syndrome, Mixed Gonadal Dysgenesis, True Hermaphroditism,Trnaputrika (Male Pseudohermaphroditism), Abnormalities in Androgen Synthesis, Abnormalities in Androgen Action, Abnormalities in Mullerian Regression, Developmental Defects of Male Genitalia

- पुरुषस्य यदा बीजे बीजभागः, प्रदोषमापद्यते, तदा वन्ध्यं जनयति || - *Charaka*

- Positive family history
- Delayed / poorly developed secondary sexual characters
- Small sized atrophied testis
- OAT syndrome
- No any elicitable causative factors
- Poor response for treatment

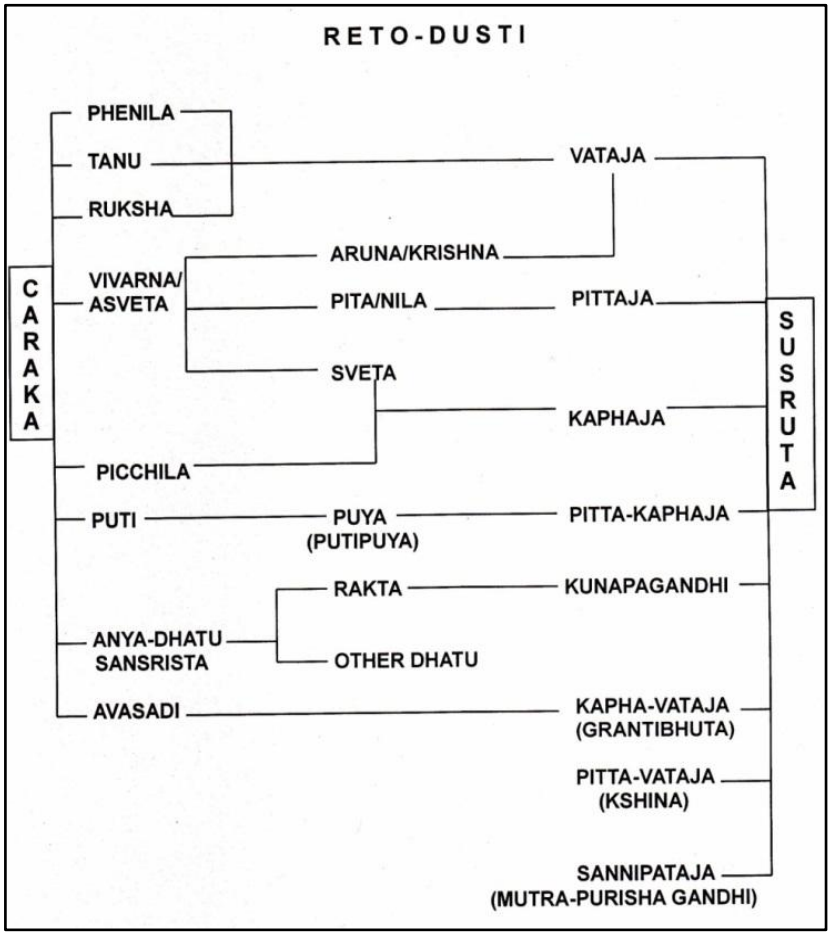
(Vakri), Vatika Sanda or Pavanendriya, Immotile Cilia Syndrome, Infertile Male Syndrome, Kallaman's Syndrome, Germinal Cell Aplasia (Sertoli Cell-Only Syndrome) etc.

Cryptorchidism: Undescended testes are a condition in which the testes are arrested at some point in its descent from intra abdominal location to the scrotal sac.

Immunological Factors: Satmya one among six garbhotpadakara bhavas may be considered in this context as compatibility between sukra & artava. Immunological infertility either due to autoantibobides or heteroantibodies to consider as asatmya.

Vrisanaksepa (Torsion of Testis): This is produced due to provoked vata (Ca Su 20/11) It results from sudden cessation of venous drainage and arterial supply to the testis, usually following sudden muscular effort or physical trauma. There may be coagulative necrosis of the testis and epididymis, or there may be haemorrhagic infarction.

Thermal Factors: Testis and sukravaha srotas are sensitive to temperature (Ca Su 14/10; Ss Ci 32/26; Ca Vi 5/19) Varicocele probably interfers with the cooling mechanism and depress spermatogenesis.



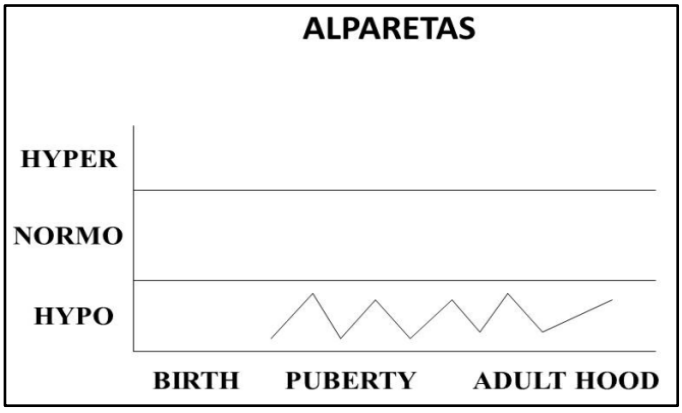
Metabolic Causes: Shukra dhatu is formed in shukravaha srotas when sukshma bhaga of majja and homologous particles of shukradhatu from ahararasa acted upon by shukragni. Hence any metabolic defects related to majjadhatu, shukragni, ahararasa and shukravhasrotas lead to defective formation of shukradhatu. For example majjaksaya leads to alpasukra (Ss Su 15/9).

Manasika: Cinta, bhaya, soka (Ca Ci 2/4/43,44), trasa, irsya (Ca Ci 8/24), witnessing faults in women (Ca Ci 2/4/43,44); daurmanasyam (Ca Su 25/40); krodha (Ca Ci 2/4/43,44)

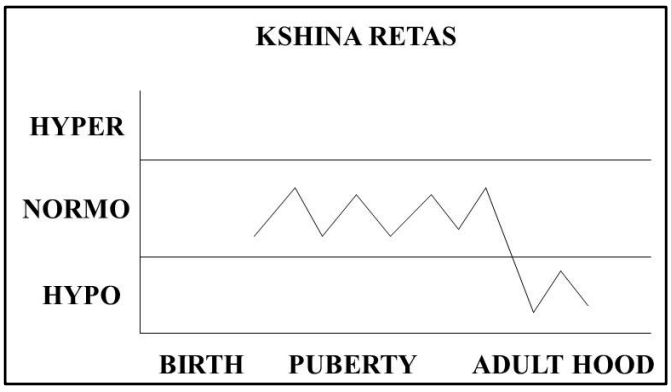
Unexplained Infertility: unwholesome actions of previous life (Ca Sa 3/9) leading to undescent of soul into embryo (Ca Sa 3/11) which in turn causing infertility may be considered under atmaja which otherwise called as unexplained or idiopathic infertility DEFECTIVE SEMINAL PLASMA: semen is a collective fluid of testicular, seminal vesicular, prostatic and bulbourethral gland secretion. Sperms are suspended in seminal plasma. Seminal plasma is a buffer and acts as media for transportation of spermatozoa. Hence quality of seminal plasma is very important in transporting sperms across vaginal canal of acidic milieu up to cervical mucus. It is the common trend in practioners to consider only sperm count and sperm motility. However, each and every factor of seminal parameters provide valuable information and indicators for treatment. Especially when considered ayurveda management, ayurveda described retopariksha and indicated treatment accordingly. So unless and until we understand seminal parameters in terms of reto parikshya bhavas it is difficult to select the treatment as per ayurveda.

Management of Retodusti in general: The semen reports may be interpreted in terms of retodusti and the following drugs may be administered

- *Self Liquifaction Time:* normally semen liquefies within 40 minutes. Semen sample not liquefied up to 40 minutes may be considered as Granthibhuta Retas and drugs like Sathi, Shilajatu, Chandraprabhavati etc.



- *Volume:* normal semen volume is 1.5 to 5.5 ml. volume less than 1.5 ml may be labeled as alpa and the semen volume may be increased by administering dugdha, ikshurasa, Satavari, Vidari etc.
- *Viscosity* of normal semen sample is to be between taila & kshoudra. Viscosity less than tila is tanu and the drugs such as Satavari, Kokilaksha, Vidari etc. increases viscosity. Increased more than khoudra is called atipicchila and drugs like Triphala, Lohabhasma, Aswagandha, Kapikacchu etc. lowers viscosity of semen.



- *Colour:* normal colour is spatikabha i.e. Grayish white (colour of alum) but not crystal clear. Crystal clear is seen in case of azoospermia/severe loigozoospermia. Yellowish white colour indicates pitta dusti. This may or may not associate with increased pus cells. In case of pitta dusti Chyavanprash, Satavari, Sariva etc. drugs are useful. Milky white is to be considered as kapha dusti where Triphala, Lohabhasma are drug of choice.
- *pH:* 7.2 – 8.5 is the pH of normal semen samples. Increased pH more than 8.5 may be treated as ruksha retodusti and drugs like Satavari, Vidari, kokilaksha etc. are useful.
- *Particulate debris:* more than 5 cells/HPS, Amorphous matter 2+ to 4+, Immunobed more than 20% are all may be considered as Anyadhatu samsrista where in Dasamula uttarbasti may be beneficial.

SAADYAASAADYATA: It will be convenient to classify the clinical conditions under alpa and kshina retas for the sake of saadyaasaadyata. Alparetas is asaadya as it is due to bijadosha where as kashinaretas is asaadya. In case of alparetas there may be positive family history of infertility, miscarriages, delayed conception etc. there may be delay in attaining the puberty. clinical examination may reveal small sized and atrophied testes. As shown in the figure in case of alparetas the parameters are constantly low since puberty. Semen analysis may show severe oligospermia or OAT syndrome etc. alparets will not respond for management. Even if there is conception it will not be retained. In case of kshinaretas the parameters are normal for some time and then decreased due to some problems. As it is secondary it may respond well for suitable management. There will be normal pubertal development and then elicitable causes like varicocele etc.

APPROACH TOWARDS MALE INFERTILE: Classify the patient under santarpanajanya or apatarpanajanya. In case of santarpana janya opt sodhana followed by shaman management on the basis of retopariksha. In case of apatarpana janya adopt brimhana line of management planned on the basis of retopariksha. Add a deepana pachana drug having vrishya/vajikara property like shunti, lasuna, pippali etc. to correct shukragni. In case of varicocele, whatever the grade of varicocele look for consistency of testes. If the consistency of testes is firm then do not consider varicocele and plan management on the basis of retopariksha. If the consistency of the testes if soft which is indicative of testicular damage and the varicocele is of grade II & III advice surgical ligation followed by medication as per retopariksha. While counselling the patient consider sadyaasadyata as mentioned above.

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MANAGEMENT OF HRIDROGA (CAD) IN AYURVEDA - CLINICAL EXPERIENCE OF A VAIDYA

Vaidya SAMBAMURTHY G.G

INTRODUCTION

Ayurveda, The science of life, deals with everything connected with life. Today it is said that Hridroga and prameha two maharogas are spoiling the health of more than one-third of the general population. Among these, who are succumbing to Hridroga, the prominent killer is said to be CAD (coronary artery disease) which is leading to IHD (Ischaemic heart disease). Study also suggests, Today this disease is taking into its clutches not only rich class people but also poor people too, who cannot afford for costly surgical procedures and life time medications.

Thus it becomes the duty on the part of the Ayurveda vaidyas to study, understand about this disease in classical texts and try to implement the knowledge in practical cases and find out an easy, comprehensive, cost effective totallistic solution to this burning problem without surgery. Thus vaidyas of ayurveda academy under the guidance of eminent and senior most guru of ayurveda Dr C.S.Somayaji made a sincere effort to understand the basic tracks in understanding Hridroga and apply the same in general practice.

The reference of Hridroga is found under त्रिमर्मयिचिकित्सितं of चरक , राजयक्ष्मा निदान in वाग्भट. In सुश्रुत after गुल्म प्रतिषेध. The प्रकरणसमन्वय between these diseases has a clear significance in understanding the सम्प्राप्ति.

व्युत्पत्ति शारीरम् –

As सुश्रुत defines हृदये बाधां कुर्वन्ति इति हृद्रोगं ।

वाग्भट says हृद्दा: – हृदि भवं गदा: हृद्दा:

गदति –गदा रोगे प्रहरणान्तरे गद शब्द indicates major illness caused to the life of a person

हृदय/हृत्_ हरति ह्रियते वा इति हृदयं

(परस्मैपद)(आत्मनेपद)

सुश्रुत clearly refers to the position of हृदय in the शरीर with शोणितकफप्रसादजं हृदयं यदाश्रया हि धमन्य: प्राणवहा: (रक्तमेद:प्रसादात्वृक्कौ)

तस्याधो वामत: प्लीहा फुप्फुसश्च,दक्षिणतो यकृत् क्लोम च तद्विशेषेण चेतनास्थानम् अत: तस्मिंस्तमसावृते सर्वप्राणिन: स्वपन्ति भवति चात्र ;

पुन्डरीकेण सदृशं हृदयं स्यादधोमुखम ॥

जाग्रतस्तद्विकसति स्वपतश्च निमीलति (similar to पद्माकोश प्रतीकाशं रुचिरं चाप्यधोमुखम् । हृदयं तद्विजानीयाद्विश्वस्यायतनं महत्।)(सुधा टीका)

हृदय is the seat of व्यान वात , अवलम्बक कफ, साधक पित्तं & is also the मूल of प्राणवह & रसवहस्रोतस्।

चरक says षडङ्गमङ्गविज्ञानं इन्द्रियाण्यर्थपंचकं । आत्मा च सगुणश्चेत: चिन्त्यं च हृदि संश्रितम्।

हृदयं is the seat of षडङ्ग , इन्द्रियाणि, अर्थपंचकम्, आत्मा , मन & बुद्धि।

Thus , "Hridroga" may completely affect entire life force of a person . Charaka says - मर्माणि बस्तिं हृदयं शिरश्च प्रधानभूतानि वदन्ति तज्ञा:। प्राणाश्रयात् तानि हि पीडयन्तो वातादयोऽसूनपि पीडयन्ति ।

Presentation of Hridroga

Hridroga lakshanas can be found in three ways.

१. False - हृद्रोगलक्षणा : सवातगुल्महृद्रोगी प्लीहा शङ्की च मानव :॥

हृदयस्पन्दनं रौक्ष्यं (पाण्डुपूर्वरुप)

हृत्पीडाकार्श्यदौर्बल्यं (ग्रहणी)

विविधैर्वेदनोद्भेदैर्वाय्वादि भृशकोपत: ।

सूचीभिरिवगात्राणि विध्यतीति विसुचिका ।

अलसं क्षोभितैर्दोषै: शल्यत्वेनैव संस्थितम्।

शूलादीन् कुरुते तीव्रांश्छर्द्यतीसार वर्जितान् ॥

२. दोषसञ्चयजन्यहृद्रोग : functional one

३. धातुविकृतिजन्यहृद्रोग : in these there is physical change in हृद्रोग .

हृद्रोगनिदान:

- As हृदय is रसवहस्रोतोमूल ,सम्प्राप्ति may be due to the स्रोतोदुष्टिकारणानि– गुरु, शीत, अतिस्निग्धं अतिमात्रं समश्नताम् ,रसवाहिनि दुष्यन्ति चिन्त्यानां चाति चिन्तनात् ।
- It also a प्राणवहस्रोतोमूल –Thus due क्षयात् , सन्धारणात् , रौक्ष्यात् क्षुधितस्य, व्यायामात् ,अन्यस्रोतसम्बन्धित दारुण व्याधय: ।
- According to सुश्रुत वेगधारण , उष्णान्न, रुक्षान्न, अत्यन्न, विरुद्धाशनं, अजीर्णाशनं,असात्म्यान्नसेवनं।
- चरक– व्यायाम,तीक्ष्ण विरेचन् & बस्ति , चिन्ता ,भय ,त्रास, अतिगदाचारा: ,छर्दि सन्धारणं , आमसन्धारणं, कर्शणानि
- वाग्भटintelligently considers hridroga in the राज्यक्षमा अध्याय but explain तेषां गुल्मनिदानोक्तै: समुत्थानैश्च सम्भवा:

<u>गुल्म निदानं</u>

- व्याधिकर्शित: वातलानि अत्ति
- बुभुक्षित: शीतं वाऽम्बु अत्ति
- अनुचान्नानि लंघनप्लवनादिकम्
- छर्दिसन्धारणं

<u>राज्यक्षमानिदानं</u>

- साहसं वेगसंरोध: शुक्रौज:स्नेह:संक्षय:।
- अन्नपानविधित्यागश्चत्वारस्तस्य हेतव:॥

आहार:	विहार:	आहारविहारौ
रुक्षोष्णान्नं	वेगाघात:	बुभुक्षित: शीताम्बु सेवति
गुरुशीतस्निग्धादि अन्नं	भय,चिन्ता	अनुचान्नानि लंघनानि सेवति
विरुद्धाशनं	तीक्ष्णविरेकबस्तौ	कफकर आहार वातकर विहारा:
अजीर्णाशनं		पित्तकर आहार वातकर विहारा:
अध्यश्नं		
असात्म्यान्नं		

लक्षणानि

वातज: १ हृदयतोद: २ निर्मथन इव ३ दीर्यते इव ४ स्फोट्यते इव ५ पाट्यते इव ६ वेदना आयाम दीर्घीक्रियत इव ७ भिद्यते इव ८ हृदय स्तम्भनं ९ हृदिशुन्यता १०हृदिद्रव: ११ अकस्माद्दीनता १२ शोक: १३ भय: १४ शब्दासहिष्णुता १५ वेपथु: १६ वेष्टनं १७ मोह: १८ श्वासरोध: १९ अल्पनिद्रा २० हृदिशोष:

पित्तज : १ दाह: २ मोह: ३ तम: ४ सन्ताप ५ ज्वर: ६ तृष्णा ७ भ्रम: ८ संत्रास ९ मूर्च्छा १० स्वेद: ११ अम्लक: १२ क्लम: १३ अम्लपित्तछर्दनं १४ धूमक: १५ चोष: १६ मुखशोष: १७ पीत भाव:

कफज : १ गौरवं २ कफसंस्रावं ३ अरुचि: ४ आस्यमाधुर्यं ५ स्तम्भ: ६ स्तब्धं ७ कास: ८ अग्निसाद: ९ निद्रा १०आलस्य: ११ ज्वर: १२ तन्द्रा १३ भारिकं साश्मगर्भवत्

क्रिमिज : १ सकण्डू वेदना २ श्लैष्मिक क्रिमिलक्षणानि ३ उत्क्लेश: ४ हृल्लास ५ शोष: ६ कण्डू ७ कफस्रुति: ८तम: प्रवेश: ९ ऋकचेनेवदार्यते प्रततं सन्निपातन: मिश्रितलक्षणानि

सम्प्राप्ति:

दूषयित्वा रसं दोषा: विगुणा: हृदयं गता: ।

कुर्वन्ति हृदये बाधां हृद्रोगं तं प्रचक्षते ॥

Vitiated rasa through doshas enter into hridayam and cause troubles which is known as hridroga . (बाधृविलोडने) (बाधा दु:खे निषेधे च) which obstructs its functions .

DISCUSSION ABOUT THE SAMPRAPTI

According to vaghbhata समुत्थानैश्च means samprapti is possible in two ways

1. राज्यक्ष्मा सम्प्राप्ति:

2.गुल्म सम्प्राप्ति:

In first one प्राणवहस्रोतस् predominantly involves ..

In second one रसवहस्रोतस् predominantly involves.

Generally प्राणवहस्रोतोदुष्टि cause major damage leading to अङ्ग विकृति:

Rasavaha स्रोतोदुष्टि cause functional दोषजन्यविकृति: in the स्रोतस . later अङविकृति may also be there.

<u>The coronary artery disease which we are discussing mainly is due to गुल्मसम्प्राप्ति & रसवहस्रोतोदुष्टि is प्रधान here.</u>

चिकित्सा

चिकित्सा in हृद्रोग in three steps ...

१ निदान परिवर्जन

२.निदान प्रत्यनीक चिकित्सा

३.पथ्यापथ्य

* वातजहृद्रोग: चिकित्सा

1st categery [सायामस्तम्भस्थूलामज] आमपाचन, दोषनिर्हरण, रसायन चिकित्सा

2nd category [सद्रवायामप्रमोहज] सन्तर्पण, वातशमनं, रसायन चिकित्सा

- निदानप्रत्यनीक चिकित्सा

दधि, कुक्कुटमांसं, अधिकमत्स्यसेवनं fridge items are stopped according to nidana and specific chikitsa as per shashtra .

As वाग्भट says :::

दीप्तेऽग्नौ सद्रवायामे हृद्रोगे वातिके हितम् ।

क्षीरं दधि गुड: सर्पिरौदकानूपमामिषम्।

एतान्येव च वर्ज्यानि हृद्रोगेषु चतुर्ष्वपि ।

शेषेषु स्तम्भजाड्यामसंयुक्तेऽपि च वातिके ।(अ.हृ.चि.६\४१–४३)

कफानुबन्धे तस्मिंस्तु रुक्षोष्णामाचरेतक्रियाम् ।

पित्तजचिकित्सा शास्त्रोक्त हृद्रोग चिकित्सा, रक्तपित्त ज्वरोक्त चिकित्सा, बाह्यन्तपरिमार्जन .

METHODS OF STUDY

Nearly 150 patients of hridroga with (CAD)has been treated in a period of 10 years.

They were classified into 5 categories

1. सायामस्तम्भशूलामजवातजहृद्रोग:

2.सद्वायामप्रमोहज वातजहृद्रोग :

3.पित्तज हृद्रोग

4.कफज हृद्रोग

5.कृमिज हृद्रोग

*The diagnosis was confirmed after ruling out अजीर्णजन्य, वातजग्रहणीजन्य, अम्लपित्तजन्य लक्षणा:

* The specific समुत्थानं in each case was identified and treated as per classical texts.

* In few पित्तजहृद्रोग cases मृदुविरेचन was given before starting शमन चिकित्सा

* in few कफजहृद्रोग and सायामस्तम्भशूलामज वातजहृद्रोग cases मृदुवमन was performed.

* for शमन चिकित्सा वाग्भट हृद्रोग चिकित्सा सूत्र was clearly applied.

* The treatment differ from patient to patient as per the समुत्थान was identified in each other.

* The principle of hridroga was found according to brihatrayeekaras were observed as below ...

>Medicines with हृद्य गुण to reach अङ्ग

>Medicines with स्नेह guna to reach the target

>Medicines with पाचन क्षरण गुण to liquify अवरोध

>The medicines which do अनुलोमन of विलयित दोष towards kostha and out .

>निदानप्रत्यानीक चिकित्सा. {उदा.drug for दधि (अभिष्यन्दन गुण) सेवनजन्य हृद्रोग, मरिच (प्रमाथी द्रव्य) as the drug of choice.

OBSERVATIONS

*Within one month of treatment in 80% 0f cases symptoms subsided, circulation improved.

* Within three months 60% of blocks got cleared

*Within 6 month there was complete clearance of blocks as per the cardiovascular cartography reports shown here.

*In 10% of cases with प्राणवहस्रोतोदुष्टि कारणानि there were no observable relief even after continued treatment for one year.

*Pittaja hridroga cases resolved within 15 days completely as here blockage were due to inflammatory condition of cardiovascular system

*Along with the specific treatment in each case निदान परिमार्जन ,सत्वावजय, पथ्यापथ्य चिकित्सा had a main role in early relieving of all symptoms in all cases .

DISCUSSION

* All types of presenting symptoms are experienced in practice.

*As a complication of मेहः, हृद्रोग is found in no.of cases.The treatment schedule included prameha line of treatment also along with Hridroga chikitsa.{ which is explained by वाग्भट in पूर्वरूप and उपद्रव of मेहः .हृन्नेत्रजिह्वाश्रवणोपदेहः& हृद्ग्रहः}

*Nidana and lakshana are given vast detail in brihtrayee.

*maximum no of (CAD) cases are presented in sayamastambhshoolamaja vataja hridroga type {gulma samprapthi} .....these are very much curable in our approach.

*Pranavaha sroto dushti janya hridroga is difficult to cure as angavikruti will be mainly found.

* the medicines & treatment techniques very much affordable by a common man as treatment is possible using common household items.

CONCLUSION

* As the research has been done in general practice level research standards could not be followed.

*further research & study in an elaborate manner is necessary for resounding conclusion.

* Although physical management of hridroga is possible, only such an approach will not be complete. As हृदय is also seat of मनस् ,इन्द्रिया: & इन्द्रियार्था:proper counselling is also needed on indivisual basis. As charka says in अर्थेदशमहामूलीय अध्यायं (च.सू.३०)

तन्महत् ता महामूलास्तच्चौज: परिरक्षता ।परिहार्या विशेषेण मनसो दु:खहेतव: ।हृद्यं यत् स्याद्यदौजस्यं स्रोतसां यत् प्रसादनम्।तत्तत् सेव्यं प्रयत्नेन प्रशमो ज्ञानमेव च ।तत्र अहिंसा प्राणिनां प्राण वर्धनानां ।

वीर्यं बलवर्धनानाम् विद्या बृहणानाम् इन्द्रियजयो नन्दनानां तत्वावबोधो हषणानां ब्रह्मचर्यं अयनानां ।

Cancer Care in Ayurveda – Clinical Experiences

By Dr.K.M.Madhu, Senior Physician,
Vaidyaratnam.P.S.Varier's Arya Vaidya Sala Kottakkal.

Introduction

Cancer is a dreaded disease which is one of the threats for the entire world. Various treatment modalities are available for the disease. Innumerable research works are being carried out in this field across the globe. As per the latest statistics, 7-9 lakhs of people are freshly detected with cancer in every year in India. Approximately 25 lakhs of cancer patients are in India. About 4 lakhs deaths take place due to cancer every year in India (National Cancer Control Programme). Even though the modern system of medicine has made advancements in cancer care, there are certain areas where there is no definite answer for the disease management. Entire medical fraternities as well as patients are looking for new systems of treatments. Ayurveda which is an ancient system of medicine has certainly a big role in evolving a new system of management for cancer. In modern system the cancer care can be divided into two areas. Curative care and palliative care. Ayurveda in its holistic approach can accept these two areas alike.

Vaidayratnam.P.S.Varier's Arya Vaidya Sala Kottakkal is a century old institution working in the field of patient care has made some efforts in this field. In this paper we want to share our view with this audience. We have started an exclusive Department for cancer care in 1999. We treat cancer cases in both curative as well as palliative aspects depending on the condition. Around 20000 cases are treated in these years and the data has been stored in a computerized system. A team of doctors are working in this field.

Ayurvedic view

Ayurveda doesn't see cancer as a single entity. It is surprising that this has not been included in the Maharogas. Perhaps the reason may be the lesser incidence at that period. Arbuda is one of the similar descriptions of cancer. Vidradi, Grandhi may have some similarities. Various other descriptions can be taken for evolving treatment principles. Tridosha theory can be applied in the treatment of most of the cases.

Possible Nidana of cancer in the present context

1.Apathya Ahara and Vihara
2. Imbalance of Doshas
3. Atmospheric pollution
4. Constant mental stress

Treatment principles adopted

Dosha vitiation and affected dhatus can be considered here. In our clinical experience we have evolved certain groups of drugs in each condition. Vatha can be considered as the predominant dosha in most of the cases.

Sneha sweda karma and panchakarma can be used in certain conditions.

Treatment experiences

May I share with you some of the interesting cases.

Case No.1

A male patient aged 67 reported in the hospital on 26.09.12 with a diagnosis of carcinoma rectum. No modern active treatments like surgery, chemotherapy and radiation were done. He had slight difficulty for passing stools. CT Abdomen done on 12.07.13 shows circumferential wall thickening of lower rectum confined to the wall. S/O Ca.Rectum. No evident lymphadenopathy or metastasis. We have given the following medicines with strict diet regimen.

1. Nimbamruthadipanchathiktham Kwatham 2 nos Bd
2. Kankayana Vatika 1 no Bd
3. Sahadevyadi Leham 3 gm Bd
4. Triphala Kshalanam – Enema
5. Pilocid gel for local application

The medicines and the prescribed diet are continuing now. Recently the CT Abdomen was repeated. The growth remains confined to the same area with any spread. Physically he is better. He has occasional diarrhea but subsides immediately.
He could manage the disease without any aggressive therapies which may have deteriorated his quality of life.

Case No.2

A 67 year old male patient with Chondrasarcoma and lung metastasis came here. He underwent surgery for the Chondrosarcoma in right thigh followed by chemotherapy and radiation. In 2009, Lung metastasis was detected in 2010. He opted ayurveda. Initially he had cough with hoarseness of voice. Presently he is asymptomatic and continuing the medication. The investigative parameters didn't show remarkable change. The following medicines were prescribed to him.

1. Sahadevyadi Leham 3 gm Bd
2. Gugguluthiktham Kashayam 10 ml Bd
3. Rasasindooram capsule 2 Bd
4. Gugguluthiktha Gritham 10 ml at bedtime.

He is comfortable and leading a normal life. As per the oncologist opinion this is a good improvement. Quality of life and the longevity he managed to achieve is the solid proof for the efficiency of our management.

Case No.3

An 80 years old man came with Ca.Prostate. No active treatments were done. He had the initial visit on 06.09.13. At that time he had difficulty of passing urine. Presently asymptomatic. Even though his investigative parameters have no remarkable change, he could manage a normal life. The medicines given were

1. Gugguluthiktha Kashayam 15 ml Bd
2. Sahadevyadi Leham 3 gm Bd
3. Rasasindooram capsule 2 Bd
4. Varanadi Gritham 10 ml at bedtime.
5. Dasamoolam paneeyam

Case No.4

An 80 years old person with the diagnosis of Ca.Gastro oesophageal junction presented here with difficulty of swallowing, constipation and breathing problem on 16.08.13.

No active treatments were done so far. He was treated with the following medicines.

1.Gugguluthiktham Kashayam 10 ml Bd
2.Rasasindooram capsule 2 Bd
3.Gugguluthiktha Gritham 10 ml at bedtime.

Presently he is assymptomatic and taking the medicines regularly.

Benefits of Ayurvedic therapy

Ayuveda treatment in cancer has its own benefits. The conventional modern treatments are more expensive and majority of our population can't afford this system. It is our duty to explore efficient and cost effective treatments in our system. The existing Ayurvedic management is cost effective compared to the modern system.

Exact cell line diagnosis is absolutely necessary to start modern aggressive treatments. But in some cases this exercise may not be worthwhile. In our system we can start our treatment according to our own parameters.

Aged population is increasing in our country. The conventional aggressive treatments may not be feasible in this group of patients due to various reasons such as poor health condition and prognosis. So they may be discarded by the modern system. Ayurvedic treatments are possible in most of these cases which usually give physical and psychological support to the patient. The quality of life and longevity may be improved in these cases.

Demerits of Ayurvedic therapy

There are certain demerits for our system. This may not be considered for cancer care but for the treatment of other similar conditions. The main problem for us is the inherent inability of the system to tackle medical emergencies. This may happen during the care of some of the cases. Presently we depend upon modern system for the management.

Non availability of quality herbs causes a major problem. Some of the rules relating to wildlife protection deteriorate the situation.

Moreover most of our physicians are not getting enough exposure in the cancer management during their academic period.

Possible steps in promoting cancer care in Ayurveda

1. Setting up cancer clinics attached to each Ayurveda Colleges under Kayachikithsa Department. This will give good exposure to the students.
2. Link all the institutions which are providing cancer care in a particular website. So that people can easily search for their convenient places.
3. Collaborative work with modern medical system may enhance our scopes. Arya Vaidya Sala undertook some collaborative reaserch works which gave us encouraging results.

Conclusion

Ayurveda has its own space in the cancer care. There is a tremendous scope for research works in this field. This may produce less expensive and efficient remedies which may be suitable to all sections of society especially the poor class.

MANAGEMENT OF ACUTE STROKE BY AYURVEDA

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Stroke syndrome is a condition presented with a set of symptoms like semi consciousness or unconsciousness to coma, weakness in a part of the body& with hypertension.

The causative factor was explained to the stoke syndrome is disturbed blood supply to the brain cells due to infarction or hemorrhage. Infarction may be due to embolism or thrombosis.

The same stroke like presentation can occur due to infection like tuberculosis, malignant growth, also by accidental head injuries.

Here let us analyse above conditions on the basis of ayurveda.

Ayurveda as a system of medicine in developed on the basis of karya karana siddanta. Different symptoms of a disease are karya and the 'karana' of the above symptoms must be explained. In ayurveda karana of human physiology that is normal functioning of the body is explained on the basis of three doshas.

The pathogenesis of a disease is explained by derangement of three doshas. The treatment (oushadhi) is explained to correct the deranged three dosha functions. By kala, artha, karmas, heena, mithya & athiyoga causes derangement of three doshas. These deranged three doshas causes different diseases. And also an agantu dosha – abhighata (external injury) & krimis (bacterial & parasites) also cause derangement of doshas to cause different diseases.

Here kala, artha, karmas, heena, mithya & atiyoga, & agantu causes like krimi & external injuries are called as vipra Krista karanas (distant causative factor) these leads in to derangement of three doshas that is sanni Krista karana (near causative factor).

In ayurveda any disease to happen there must be derangement of three doshas.

Let us analyze it in context of stroke syndrome.

The symptoms of stroke syndrome are

1. semi consciousness or unconsciousness or coma

This symptom is called as mada, murcha & sanyasa in ayurveda.

2. one sided weakness in the body that is Hemiplegia

This symptom is called as pakshaghata.

3. convulsions - known as Akshepaka or Apatantraka

In the contest of stroke syndrome usually patients end up in theHemiplegia (pakshaghata).

Le us analyze pathogenesis of pakshaghata.

In charaka samhita it is told pakshaghata occurs due to stana samshraya of prakrupita vata dosha (dearranged vata dosha) at tiryaggati dhamani at urdwa deha.

Here dearrangement of vata dosha leads to this pathology. So to understand how vata dosha dearrangement as occurred becomes important. By different viprakusta karanas leading to dhatu kshaya leading to vata dosha prakopa. This prakupita vata stana samshraya at tiryagg dhamani at urdwa deha leading to pakshagata

1. By marga avarana vata prakopa leads to prakupita vata stana samshraya at tirgata dhamani at urdwa dehaga leads to pakshagata.

Here marga avarana by what becomes important. It must be due to rakta in context of pakshagata.because the pathology occurs at localized area not sarvangaja. To this to happen rakta dusti should occur,rakta dusti can occur with-vata swaroopa,pitta or kaphaja, dwi doshaja & sannipataja, and also by abhighata and krimi like this dooshita rakta- does margavarana of vata dosha leading to vata prakopa. This prakupita vata getting stana samshraya at tiryaggata dhamani at urdva deha leading pakshaghata.

If rakta dushti by pitta swarupa, then leading to pakshaghata, will have symptoms of dhaha, brama, murcha also with pakshaghata.

If rakta dushti by kapha leading to pakshaghata will have symptoms of gurutva (heaviness), supti (numbness), etc symptoms.

If rakta drushti by both pitta & kapha leading to pakshaghata the symptoms will be mixed of above.

Usually in stroke syndrome we have, Hemiplegia along with brama (giddiness), mada (semiconsciousness), murcha (unconsciousness), & supti (numbness), gurutva (heaviness) in the part of the body.

If the rakta dushti pathology can occurs due to krimi (infection) & abhighata (injury) these also leading to pakshaghata.

Then as a physician it is our duty if a patient of pakshaghata came, we have to find out how pathogenesis has occurred, then that perticular cause should be treated.

Usually stroke syndrome patient have pakshaghata with numbness & semi conscious- --ness indicates kapha & pitta swarupa rakta dusti pathology leading to raktavarana vata prakopa – leading to prakupita vata stana samshraya at tiryaggata dhamani at urdva dehaga leading to pakshaghata.

Here treating such a case the principle in pitta & kapha with vata dosha then pitta should be treated first, then kapha, then vata has to be treated.

In stroke syndrome, pitta symptoms are mada, murcha, brama. Then treatment of mada, murcha as to be adopted as the presentation. If patient presents with mada (semi conscious state) then mada as to be treated. If patients presentation is murcha (unconsciousness) then murcha treatment to be done. If patient presents as sanyasa (coma stage) then that has to be treated. The treatment told is sheeta parisheka, sheeta alepa, & teekshna nasya. As teekshna nasya is given patients is awakened from the state of murcha, then accha sarpi pana to be done, so that vata does not spread to shakhas. Then jwara chikitsa should be done for ama pachana. Afterwards for tarpana – narikela jala with sita to be given. As patient came out of unconsciousness or murcha, as he came out of pitta stage. Then kaphaja symptoms like heaviness, numbness take over. Then kapha ama pachana treatment must be done by ruksha alepa, & amapachana internally by giving guggulus & mahamanjishtadi kashayas,agni alepa etc.

As patient came out of kapha stage then still weakness in limbs is there due to dhatukshayaja vata prakopa, then that has to be treated by brihamana vata hara treatment by abhyanga, shirodhara, basti karma, mridhu virechana, shashtkashali pandasweda sweda etc. to get complete recovery. This treatment may be needed for three to four months.

AYURVEDIC MANAGEMENT FOR CHRONIC KIDNEY DISEASE – CLINICAL EXPERIENCES OF A PHYSICIAN

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ABSTRACT

Author belongs to a traditional family of Ayurveda (5th generation) and was practicing for 21 years (1991-2012) across the country in various capacities. Out of academic interest, he happened to handle some cases of CRF/CKD (*Chronic Renal Failure / Chronic Renal Disease*) and his experiences are presented in this paper. The treatment is mainly limited to Gr 1 to 3 CKDs with or without modern concomitant treatment. The management is mainly based on oral administration of *Bhumyamalaki* (*Phyllanthus amarus*) Aquous Extract 1-2 g tablets 2-3 times per day for 2-5 years duration. This prescription is supported by *Guduci* (*Tinospora cordifolia*) *sattva* 3-5 g 2-3 times per day in case the response to *Bhumyamalaki* treatment is not encouraging. Total reports related to 17 patients are presented here. None of the patients required dialysis during the period of treatment which provides leads for the future. Most importantly the author's diagnosis as *Prameha* and/or *Vyadhisankara / Nidanarthakara roga* is very essential part of this paper.

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Introduction:

There is a rising incidence of Chronic Kidney Disease (CKD) that is likely to pose major problems for both healthcare and the economy in future years in India. It has been recently estimated that the age-adjusted incidence rate of ESRD (End Stage Renal Disease) to be 229 per million population (pmp), and >100,000 new patients enter renal replacement programs annually. The prevalence of CKD was observed to be 17.2% with ~6% have CKD stage 3 or worse. It should be stressed to all primary care physicians taking care of hypertensive and diabetic patients to screen for early kidney damage. Early intervention may retard the progression of kidney disease (Ajay K Singh et al., Epidemiology and risk factors of chronic kidney disease in India – results from the SEEK (Screening and Early Evaluation of Kidney Disease) study *BMC Nephrology* 2013, **14**:114).

On the other hand, alternative system practitioners are also handling several cases of CKD at their end many times at the secondary or tertiary level. Author is also one among such physicians who happen to handle several cases of CKD (earnest CRF) under compulsion most of the times. As a enthusiastic Ayurvedic physician the author handled most of the kidney diseases as CRFs/CKDs between 1991-99. All those hundred odd cases were considered as *Vrikka sotha* or related conditions and the treatment were given in the form of *Rasaushadhis* predominantly (Vide: Table No. 1).

Table No. 1

List of formulations prescribed by author for CKD patients between 1991-99

1.) Punarnava mandur
2.) Chandraprabhavati (with Kajjali)
3.) Gokshuradi guggulu
4.) Punranavarishta / Punarnavasava
5.) Kshara churna
6.) Hajrul Yakudi bhasma
7.) Vanga bhasma
8.) Trivanga bhasma
9.) Vasanta kusumarkara ras
10.) Brhat Vangeswar ras
11.) Tarakeswara ras
12.) Varunadi kwatha
13.) Punarnavadi kwatha
14.) Barely powder
15.) Neeri tablets
16.) Cystone tablets
17.) Nirvedanavati(AP pharmacopeia)
18.) Abana tablets
19.) Avipattikara churna
20.) Nirocil tablets

It is in 1999, the author recognized the correct diagnosis when he come across a case of CKD (stage 3) at Chennai (India). This patient is a male subject aged about 38 years who developed CKD after being administered with some Siddha medicines to change his HIV +ve status. Nephrologists have advised the patient to consider Dialysis or Renal transplantation. This case approached the author through one of the senior colleagues and therefore, forced to treat. Since the patient was having Viral load (of HIV) as well as turbidity of urine (due to reduced GFR), some antiviral herb possessing some effect on urinary system was considered as an requirement. Henceforth, *Bhumyamalaki* (*Phyllanthus amarus*) was selected as the herb of choice. *Bhumyamalaki* extract tablet 1 g is used as the recipe by the author since then.

It is also decided to denote CKD as *PRAMEHA* since the patients when present with any complaint is turbid urine or loss of appetite or fatigue in case of Gr1-3 CKD. Pedal oedema (*Pada Sotha*) will be seen in case of Gr 3-5 CKD patients only. But, we do not come across pedal oedema among the signs and symptoms of *Prameha*. Moreover, the basic pathology in CKD is associated with renal filtration and *Prameha* in Ayurveda deals with filtration defects. The early symptoms like loss of appetite etc are indicative of *Shatkriya kalas* of Sushruta which helps in the diagnosis of a disease at a very early stage. In most of the cases RFT value show elevated S. Creatinine levels of about 3 and USG showing extensive renal paranchymal damage.

Initially, *Varunadi kvatha* has been tried as the vehicle for Bhumyamalaki extract. About 30 ml of decoction was administered along with Varunadi kwatha 15-20 ml twice or thrice daily along with the oral tablets. However, it was also noted that Varunadi kvatha which is repeatedly prescribed by Vaids for urinary tract disorders is not indicated for the same as per Sushruta samhita. Moreover, no two pharmacies in the market manufacture the same formula of *Varunadi kvatha*. Neither, the formula matches with that in Sushruta samhita. But, *Viratarvadi kvatha, Brhatyadi kvatha, Muskakadi kvatha* are ideally to be tried on urinary system. Varunadi kvatha was administered along with Bhumyamalaki tablets but later after experiencing no difference between results in Bhumyamalaki treated patients and in Bhumyamalaki plus Varunadi kvatha treated patients it was decided to discontinue and add Guduci sattva so that the regeneration (if possible) of damaged matrix (mutradhara kala) / asaya (mutrasaya) happens.

Interestingly, Gr 2 and 3 CKD responds more effectively if Guduci sattva is added to Bhumyamalaki extract. All the experiences of physician are expressed in this paper.

DIAGNOSIS OF CKD:

Chronic kidney disease (CKD) is defined as the presence of kidney damage, or a decreased level of kidney function, for a period of three months or more. CKD can be divided into five stages, depending on how severe the damage is to the kidneys, or the level of decrease in kidney function.

Most diseases of the kidney attack the filtering units of the kidneys—the nephrons—and damage their ability to eliminate wastes and excess fluids.

Different Stages of CKD

CKD Stage	GFR level (mL/min/1.73 m^2)
Stage 1	≥ 90
Stage 2	60 – 89
Stage 3	30 – 59
Stage 4	15 – 29
Stage 5	< 15

Stage 1

Slightly diminished function; kidney damage with normal or relatively high GFR (≥90 mL/min/1.73 m^2). Kidney damage is defined as pathological abnormalities or markers of damage, including abnormalities in blood or urine test or imaging studies

Stage 2

Mild reduction in GFR (60–89 mL/min/1.73 m^2) with kidney damage. Kidney damage is defined as pathological abnormalities or markers of damage, including abnormalities in blood or urine test or imaging studies.

Stage 3

Moderate reduction in GFR (30–59 mL/min/1.73 m^2). British guidelines distinguish between stage 3A (GFR 45–59) and stage 3B (GFR 30–44) for purposes of screening and referral.

Stage 4

Severe reduction in GFR (15–29 mL/min/1.73 m^2) Preparation for renal replacement therapy.

Stage 5

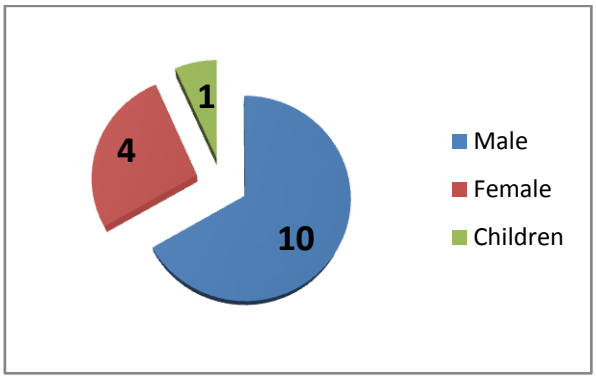
Established kidney failure (GFR <15 mL/min/1.73 m^2, permanent renal replacement therapy (RRT), or end stage renal disease (ESRD)

Usually, kidney disease starts slowly and silently, and progresses over a number of years. Not everyone progresses from Stage 1 to Stage 5. Stage 5 is also known as End-Stage Renal Disease.

OBSERVATIONS & RESULTS:

Total number of cases presented in this observational study is 17 (n=17) out of which there are 12 male and 5 female patients (Fig. 1). Their average age is 40-70 years (mean 54.3 + 9.52) and 25-54 years (mean 42.5 + 12.5) respectively. There is one patient who is 8 years old boy suffering from Gr 5 CKD (***ESRD)***. Note: Two of the patients are taken up for treatment 1½ months ago. Therefore, projected S. Creatinine and B. Urea values are presented.

Figure 1



Out of 17 patients, majority were suffering from diabetic nephropathy and hypertensive kidney disease. The details are furnished below: (Table No.2)

1.) Diabetic nephropathy - 10 No. (2, 3, 7, 8, 9, 11, 13, 15, 16, 17)
2.) Hypertensive kidney disease - 03 No. (6, 12, 16)
3.) Drug induced kidney disease- 02 No. (1, 10)
4.) Infective - 02 No. (4, 5)

Note: There are at least another 30 case reports available with the author(s) which, will be organized in a systematic way and published / reported in future course of time.

Table No. 2

Details of patients completed at least one year treatment

Sl. No.	Age/Sex	Cause	BASE LINE	V1	V2	V3	V4
			Date & Creatinin	Date & Creatinin	Date & Creatinin	Date & Creatinin	Date & Creatinin
1	40/M	siddha medicine induced	20.07.99	Oct. 99	2001	2002	Nov. 03
		renal failure (HIV pt)	2.76	2.58	3.01	2.78	1.82
2	70/M	DM type -2 nephropathy	Aug. 2003	Sept. 03	Oct. 03	Nov. 03	Jan. 04
			5.6	3.66	2.29	1.87	1.66
3	54/F	DM type -2 nephropathy	Aug. 05	03.06.06		11.07.06	June '07
			2.78	1.85	1.5	1.36	1.22
4	8/MCh	ckd gr V (viral infection)	Oct. 05	6-Mar	Nov. 06	7-Jun	26.11.07
		Renograms done at PGI	1.26	0.98	1.17	1.14	1.42
5	42/M	Rt. Renal parenchymal	06.01.06	13.02.06		27.04.06	21.07.06
		damage by chr pylonephritis	1.82	1.37	1.32	1.25	0.99

6	25/F	ckd gr V (HTN & CHF)	27.01.06	06.02.06	24.03.06	15.05.06	20.06.06
		dialysis on 25.01.06 only	10.2	8	4.88	4.4	3.9
		Actually refused on 08.02.06					
7	50/M	DM type -2 nephropathy	10.04.06	14.05.06	23.06.07	27.07.06	
			2.76	2.52	2.31	1.94	1.69
8	52/M	DM type -2 nephropathy	20.06.06	14.07.06	23.10.06		Feb. 067
		on dialysis after 2-3 days	3.07	4.9	4.06	3.17	2.86
9	52/M	DM nephropathy	20.06.06	30.07.06	27.09.06	04.11.07	19.01.07
		on dialysis after 5-7 days	7.98	8.2	7.91	5.92	4.56
10	60/M	ckd gr IV (RA Tt. NSAID	26.06.06	14.08.06	11.09.06		26.11.07
		induced) on dialysis	2.67	2.14	2.81	2.5	2.32
11	52/M	DM nephropathy	06.07.06	22.08.06		17.10.06	Dec. 06
			1.71	1.64	1.45	1.34	1.22
12	43/F	HTN / CRF	21.07.06	19.08.06	20.098.06	24.10.07	26.11.07
			2.36	2.11	1.6	1.24	0.97
13	48/F	DM type -2 nephropathy	26.08.06	05.09.06	16.10.06	02.12.06	Feb. 07
		on dialysis every 3rd day	7.91	6.58	5.34	4.1	3.36
14	65/M	DM type -2 nephropathy	06.01.07	20.01.07	2 7.05.07	7-Aug	26.11.07
			4.9	3.1	2.72	2.11	1.78
15	60/M	DM type-1 nephropathy	14.11.07	05.12.07	April '08	July '08	Oct 2008
			4.2	3.8	3.2	2.6	2.2
16	54/F	Hypertensive CKD	July '14	Aug '14	Oct '14	Dec '14	Feb '15
	Agra		4.0	3.4	3	2.8	2.4
17	60/M	Diabetic Nephropathy Gr 2-3	July '14	Aug ' 14	Oct '14	Dec '14	Feb '15
	Jaipur		4.6	3.8	3.2	3	2.6

Objective parameters:

Objective parameters like pedal oedema, fatigue, loss of appetite, turbidity in urine, reduction in the number of visits to dialysis clinics etc have formed the base for the assessment of relief.

Subjective parameters:

Subjective parameters are mainly the Serum Creatinine and Blood Urea levels. These values from the day of commencement of concomitant Ayurvedic treatment till subsequent testing have been compared. The patients who have completed at least one year treatment period and obtained four biochemical reports in support of subjective parameters are

considered in the study report. The average time duration between one report and another report is 1-3 months. The follow-up in each case is between 2-5 years.

Effect of the treatment on S. Creatinine values -

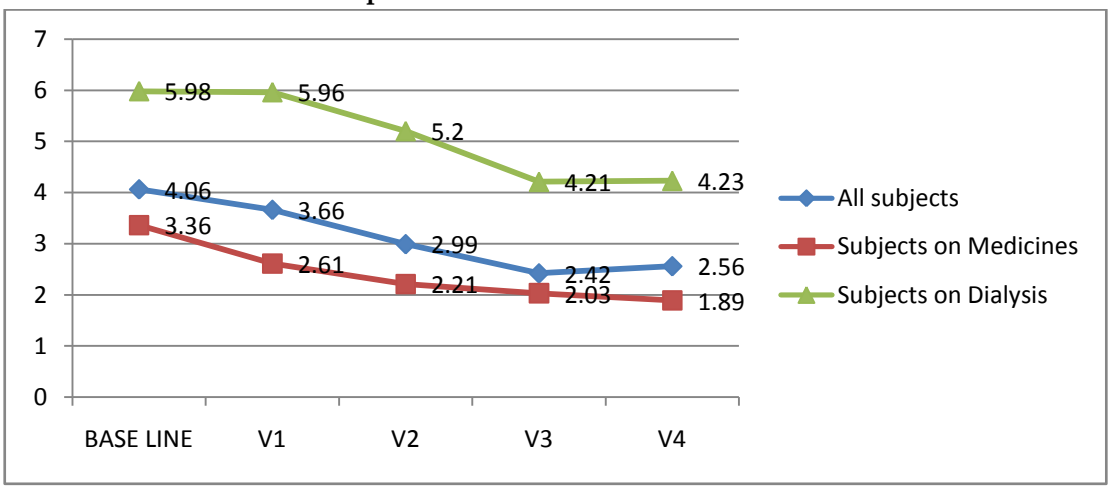
The mean average value of S. Creatinine is 4.06 mg/mL at the baseline which is found to be 2.56 mg/mL after the Ayurvedic treatment (2-5 years). The reduction in the values was observed in 1-2 months time which continued throughout the treatment period. Most importantly none of the subjects who were under Ayurvedic treatment have gone for dialysis within a period of 4 years (n=17).

In patients who were not on dialysis the following observations were madeviz., the mean average value of S. Creatinine is 3.36 mg/mL at the baseline which is found to be 1.89 mg/mL after the Ayurvedic treatment (2-5 years). None of them have gone for dialysis during 4 years of treatment period (n=12).

The mean average value of S. Creatinine is 5.98 mg/mL at the baseline which is found to be 4.23 mg/mL at the end of treatment period (2-3 years). None of them could discontinue dialysis however, the number of dialysis in a month have been reduced to 4-6 times a week which was twice a week on average at the beginning of the treatment (n=5). It is important to note that till 2010, the nephrology units used to depend upon symptoms along with S. Creatinine and S. Potassium levels before subjecting the patients to dialysis. Now a days, a fixed regimen protocols for dialysis have narrowed the scope of choice for patient as well as alternative therapy. Therefore, patients on dialysis are being discouraged by the author for Ayurvedic treatment.

Figure No. 2

Effect of the prescribed medicines on Serum Creatinine levels



Effect of the treatment on B. Urea values -

The mean average value of B. urea is 116.35 mg/mL at the baseline which is found to be 63.76 mg/mL after the Ayurvedic treatment (2-5 years). The reduction in the values was observed in 1-2 months time which continued throughout the treatment period. Most importantly none of the subjects who were under Ayurvedic treatment have gone for dialysis within a period of 4 years (n=17).

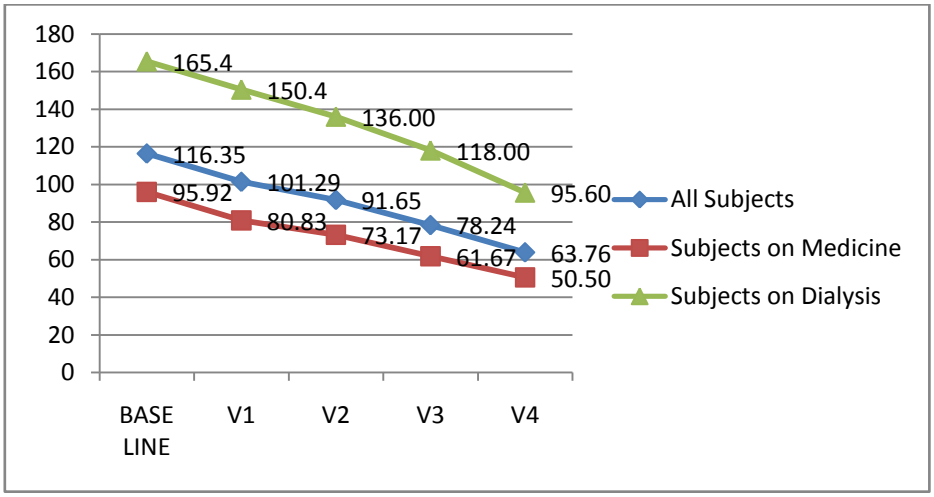
In patients who were not on dialysis the following observations were madeviz., the mean average value of B. Urea is 95.92 mg/mL at the baseline which is found to be 50.50

mg/mL after the Ayurvedic treatment (2-5 years). None of them have gone for dialysis during 4 years of treatment period.

The mean average value of B. Urea is 165.5 mg/mL at the baseline which is found to be 95.60 mg/mL at the end of treatment period (2-3 years). None of them could discontinue dialysis however, the number of dialysis in a month have been reduced to 4-6 times a week which was twice a week on average at the beginning of the treatment. It is important to note that till 2010, the nephrology units used to depend upon symptoms along with S. Creatinine and S. Potassium levels before subjecting the patients to dialysis. At present, a fixed regimen protocols for dialysis have narrowed the scope of choice for patient as well as alternative therapy. Therefore, patients on dialysis are being discouraged by the author for Ayurvedic treatment.

Figure No. 3

Effect of the prescribed medicines on B. Urea levels



Effect of the treatment on QoL Parameters:

There were five patients (3 male & 2 female) who were undergoing haemodialysis between 3-7 days period. Three such patients have tried several Ayurvedic treatments for > 3 months and discontinued. One female patient (Gr-V) discontinued treatment after about 1 yr. During the study period the S. electrolytes values were well within the norms for dialysis (i.e., S. Ptassium < 6 & S. Creatinine < 6).

Clinical symptoms like pedal edema, hypertension, urine volume etc were also evaluated and found that there is a clinically significant reduction in their severity.

DISCUSSION & CONCLUSION:

The present paper presents the observations a traditional physician of Ayurveda basing on the fundamentals of Ayurveda. CKDs of Grade 1-3 often do not present with any clinical symptomatology. Majority of cases will be diagnosed on routine biochemical or USG investigations. Therefore, it is essential to note that blind labeling of CKDs as Vrikka Sotha requires revision. On review of literature, we come across the Shat Kriyakalas (six fold pathological status) in Sushruta Samhita. According to the fundamentals, a disease which is diagnosed in the early stages will have good prognosis. The symptoms related to loss of appetite etc in *Kapha Prakopa* (aggravation of Kapha dosa) probably cover the early stages of CKD (grade 1). On the other hand, several conditions together are responsible for CKDs i.e.,

Vyadhi Sankara (combination of diseases). Therefore, a thorough study on these lines will provide base for Ayurvedic diagnosis.

This report provides leads for the effective management for CKDs which are not managed with modern evidence based therapies alone. Oral administration of Bhumyamalaki (Phyllanthus amarus) aqueous extract 1-2 g 2-3 times per day in combination with or without Guduci sattva (Tinospora cordifolia) 3-5 g 2-3 times per day reduced S. Creatinine and B. Urea significantly ($p < 0.05$). The average time taken for improvement in the clinical condition is 1-2 months and follow up is made for 2-5 years (n=17). No of the patients needed dialysis during the period of treatment.

In male subjects (n=11) who completed the treatment, S. creatinine was reduced from 4.41 mg / dl ($\pm$ 1.23 mg / dl) to 2.97 mg / dl ($\pm$ 1.12 mg / dl) at the end of the 4th visit. The mean reduction was statistically significant ($p < 0.05$). In female subjects (n=6) who completed the treatment, S. creatinine was reduced from 5.09 mg / dl ($\pm$ 3.86 mg / dl) to 2.09 mg / dl ($\pm$ 1.42 mg / dl) at the end of the 4th visit. The mean reduction was statistically highly significant ($p < 0.001$).

The main outcome of the present observation is relatively effective and safe concomitant alternate therapy to modern therapy which helps in extending the QoL of patients suffering from CKDs (Gr 1-3). The treatment also helped the patients to avoid renal dialysis for a period of > 3 years. Further studies may provide more beneficial results.

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AYURVEDA DIAGNOSIS-NEED AND SIGNIFICANCE

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Ayurveda is considered as 'lakshana sastra'.तत्तल्लक्षण बोधिताभ्यन्तर विकृति परंपरा एव परमार्थतो रोगः ||According to Ayurveda, disease is an abnormal clinical condition inside the body that can be inferred through the respective signs &symptoms.Signs & symptoms are the language of the body with which it is interacting with the physician.Hence signs & symptoms have got prime importance.Ayurvedic management is effective in many cases where modern medicine fails and vice versa.Prognosis in modern medicine may not be true or correct in all cases.Modern investigations are more helpful in ruling out certain severe pathologies than in reaching a specific diagnosis.Whatever be the modern diagnosis, an Ayurveda physician should try to make a diagnosis according to Ayurveda and treat accordingly.

In one case, a 42 yr old male patient was presented with severe bilateral leg cramps, non healing ulcers on right big toe and left heal. On color doppler investigation it is found that both femoral arteries were completely blocked. He was done embolectomy but got no relief and doctors advised amputation of bilateral lower limbs. According to Ayurveda, it was diagnosed as urusthambha due to the presence of severe pain, stiffness, heavyness (gurutva), loss of movements of both lower limbs. In the initial stage of treatment, amahara treatment was done with rookshana, pachana & langhana drugs. In the second stage vathahara treatment was done. In the first stage, Sahacharadi kashayam, Guggulu panchapala choornam were given. Virechana was done with gandharva eranda with milk, Udvarthana done with triphala choornam, also triphala kashaya kshalana with jathyadi ghritha for dressing continued for 1 month. Patient was showed improvement & resting pain was also relieved. In the second stage of treatment, snehapana was done with gugguluthikthakam ghritham subsequently patrapotala swedana was also done. Kalavasthi done with erandamooladi lekhana yoga. After 3 months, patient was able to walk 3kms without pain, even though peripheral arteries were not palpable. So that it can be inferred that collateral circulation may be established due to ayurvedic treatment.

A 55yr old male was presented with severe low back pain & weakness of bilateral limbs since 2 weeks. There was no bowel- bladder involvement and MRI showed multiple level degeneration & hernia. He was advised surgical correction. In Ayurveda the diagnosis can be Urusthambha, Kukundara marmabhighatha, and Pakvashayagata vata. Kukundara marmabhighatha can be ruled out as there was no traumatic history.Urushambha needs 'amahara' treatment and pakvashayagata

vatha needs 'anilahara'(anulomana) treatment. So the treatment was fixed as both amahara & anilahara.In the first stage of treatment, Sahacharadi kashayam with eranda taila 1table spoon, Sahacharadi kashayam with hinguvachadi choornam 1tsp, Dasamoolahareethaki 15 gm Hs for 10 days were given. Rooksha sweda, Dhanyamlaseka, Avagaha with dasamoola kashaya were followed. After amapachana treatment patient was able to stand without support and pain relieved.In the second stage, Sahacharadi kashayam, Dhanantharam tailam (101), Hinguvachadi choornam 1tsp before lunch with hot water were given. Abhyanga, Patrapotala sweda, Kashaya vasthi, Kayaseka, Ksheeravasthi with erandamoola ksheerapaka, dhanantharam tailam & guggulu thikthaka ghrithm were done. After 1 month patient was able to walk normally.

A 32 yr old male patient was presented with severe exertional dyspnoea, haemoptysis, and occasional haematemesis. It was diagnosed as Eisenmenger syndrome-ventricular septal defect with pulmonary hypertension. At that time effective management was not available.It was diagnosed as urdhvaga rakthapitha. विनाभिघातात् स्फुटकारणात् वा।रक्तम् स्रवेत् यत् प्रचुरम् कुतश्चित्॥ तत् रक्तपित्तम् भिषजो वदन्ति ॥ Because rakthapitha is a bleeding disorder without trauma or other reasons. The patient was given drakshadi kashaya, vasa swarasa, lakshadi choornam, kasamardaka choornam to add in drinking water, chyavanaprasa and vrisha ghritha. Patient showed good improvement and lead a normal life for years

A 5yr old boy was presented with mild fever, petechial haemorrhage. It was diagnosed as idiopathic thrombocytopenic purpura.He took steroids for 1 yr. Ayurvedically it is diagnosed as rakthapitha due to bleeding with unknown cause. During the first stage of treatment, boy was given drakshadi kashayam with lakshadi choornam, vasa swarasam 15ml with honey, and indukantha ghritham with rajanyadi choornam. During second stage, drakshadi kashayam stopped & advised vrisha ghritham with rajanyadi choornam. Medicines continued for 2 months so that steroids withdrawn in tapering way.Again medicines continued for 3 months so that thrombocyte count became normal.

A 12 yr old girl was presented with severe jaundice, pedal oedema, loss of appetite and mild fever for 1 month & hospitalized for more investigations. The condition was diagnosed as cirrhosis of liver with irreversible liver damage and advised liver transplantation. According to Ayurveda, it was diagnosed as kumbha kamala due to the presence of jaundice and oedema.In the first stage of treatment, drakshadi kashayam, laghupanchamoola for drinking water and punarnavadi kashayam were given.During the second stage, thippali choornam, drakshadi leha, guduchi ghrithm were given. Virechana was done with trivrit leha-once in a week and also administered vardhamana pippali. Patient became normal & now she is studying for BAMS

A 72 yr old lady was presented withleft side hemiplegia and facial palsy. It was diagnosed as anuerysms of the vessels supplying pons stem and posterior column. According to Ayurveda,it was diagnosed as pakshaghata. Virechana-eranda taila with milk,sahacharadi kashayam with dhanwantharam tailam(101),patrapotala sweda, ksheeradhara and sirovasthi with karpasastadi taila were done.Within 2 weeks patient cured completely & lead a healthy life for more than 10 yrs.

30 yr lady was presented with numbness of right half of face, dryness of right eye. MRI showed adenoid cystic carcinoma of mucous gland on soft palate & an extra dural lesion due to its perineural spread inside cranial cavity.It was diagnosed as antarvidradhi/arbuda. After surgical removal of the growth chemotherapy done & started Ayurvedic medicine. Varanadi kashayam, Gugguluthikthakam ghritham and Varanadi tailam for head were administered. Medicines were continued for 6 months. So that relapse of the disease can be avoided. Even after 20 yrs the patient is leading a healthy life.

अदृष्ट देश कालादि परिणामात् अनेकधा। पुराणा प्रविलीयन्ते नवीना प्रादुरासते।

विभिद्यन्ते स्थिताश्चाथ नृणाम् नानाविधा गदा:॥

According to the desa,kala etc character of diseases keeps on changing.old ones are disappearing, new ones are appearing and existing ones shows alterations in presentation. Two diseases may have same treatment methods,same poorvaroopa but no two diseases have same lakshana. So lakshanas have got prime importance in Ayurveda.

Ayurvedic management of Allergic Respiratory disorders

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Ayurveda, the indigenous medical wisdom is not a fragmentary knowledge. Its approach towards human being is holistic and comprehensive. It's more a health oriented than disease oriented medical system in the world. The concept of Allergy in Ayurveda is hidden under different headings and varied contexts. The lucid and perceptible descriptions are observed in the contexts of Pratisyaya, Kasa, Swasa, Udarda/Seeta pitta and Kusta (certain skin disorders). Scope of this paper is limited to deal with allergic respiratory disorders i.e. Pratisyaya, Kasa and Swasa. These three disorders are those which occupy the major chunk of population and the patients of these disorders pay frequent visits to doctors of western modern medicine and get unsatisfactory results. That is the reason why these patients approach Ayurvedic physicians for a safe and effective regimen which can completely reverse their allergic nature and thus relieving acute boats of disease.

In Ayurveda, the genesis of any disease is attributed to imbalance in innate etiological factors, which are being disturbed by external factors like diet, lifestyle and environment. The constitution and Doshas play an important role in causing pathogenesis, but their imbalance is resulted from erroneous ahara (diet habits) and vihara (life style). These external factors in the form of erroneous diet and life-style disturb the physiological mechanism of human body making it vulnerable to various onslaughts from the nature in the form of infections and allergic reactions. Ayurveda strongly proposes a theory that the external factors in the form of microbes and allergens are trifle causes of disease. When the soil is unfertile though a seed of good quality does not give a sprout, similarly as long as the homeostasis of human body is well maintained no microbe or allergen can cause the disease. This principle is unique to Ayurveda finding fault within, rather than searching for the cause out side the body. The western modern medicine which is armed with sophisticated technology and personnel, despite their endless efforts of identifying innumerable and ever changing causes for various allergic problems, the therapeutic module for allergic disorders are unsatisfactory.

If a physician is asked to name one specialty of medicine which affects approximately 25% to 30% of the world 'population', the only answer would be 'allergy' and rather alarming extension of this answer is that the incidence of allergy is raising world wide currently, 50 million Americans suffer from allergies on a yearly basis, with allergy ranking as the sixth leading cause of chronic disease and costing the U.S. health care system $18 billion per year. At all ages, allergic rhinitis without asthma is reported by nearly 90 people of every 1000. In 1996, estimated U.S. health care expenditures attributable to sinusitis were more than $5.8 billion. Two recent estimates of allergy prevalence in the United States were 9 and 16 percent, while the prevalence for specific allergic conditions, such as allergic rhinitis and atopic dermatitis, has increased over the last 15 years. What is even more alarming is the fact that these numbers continue to increase at a rapid rate. These statistics

reflect the prevalence of clinically diagnosed, commonly established allergic conditions. It is therefore imperative to understand the pertinent facts about allergy.

In 1906, Clemens Von Pirquet, the noted Austrian pediatrician, coined the term allergy from the Greek "allos" (meaning changed or altered state) and "ergon" (meaning reaction or reactivity) to describe patients with excessive physiologic responses to substances in their environment. This etymological derivation is very close to the concept of Ayurveda that innate state is significant in allergic reactions.

The allergic respiratory disorders are those which affect the upper and lower respiratory tracts. This paper deals with three prevalent disorders, i.e, Pratisyaya (Allergic rhinitis), Kasa (Ch.Bronchitis) and Tamaka Swasa (Br.Asthma). All Ayurvedic classics explained these disorders in a more comprehensive way, and exhaustive descriptions are seen regarding therapeutic aspects of these ailments. An attempt is made in this paper not only to quote the classical descriptions but to record the valuable practical experiences and research inputs in regard to three diseases. Ayurveda never believes in isolated drug therapy. Its therapeutic module consists of diet and life style besides drug. In allergic respiratory disorders this approach is more appropriate. This paper also high lights the food and life style in cause and cure of allergies.

Understanding Allergic response at immunity level:-

There are three steps to the allergic response mediated by immunoglobulin class E (IgE): **sensitization, early-phase and late-phase**. Antigen-presenting cells expose B lymphocytes to an immunologic message, causing the elaboration of allergic antibody. In genetically predisposed individuals, initial exposure to an allergen causes increased production of IgE antibodies. The antibodies bind to and sensitize resident mast cells through specific receptors. Upon subsequent significant exposure to the same substance, the receptors are cross linked, leading to degranulation and the release of histamine, leukotrienes and other inflammatory and immune mediators. Some products of mast cell degranulation (e.g., histamine, leukotrienes and others) work in concert to effect the immediate hypersensitivity reaction, which manifests as sneezing, itching and rhinorrhea. Additionally, accumulation of blood in the capacitance vessels causes inflammation and obstruction of the nasal airways the late-phase hypersensitivity reaction typically occurs two to 12 hours after allergen exposure. Cytokines, which appear to be released by mast cells on activation by allergens, play a role by attracting and activating additional inflammatory cells to the nasal tissues. It appears that once tissue has been through a cycle of allergen exposure and reaction, it may never return to its previous functional baseline. That is, chronically exposed and inflamed tissues may always be hyper-reactive not only to additional allergen and histamine insult, but also to nonallergic stimuli, such as cold air and tobacco smoke. This would explain why more patients with perennial allergic rhinitis report problems with nonallergic irritants than do patients who have seasonal allergic rhinitis. Currently, upper and lower airways disease is understood to be a continuum of inflammatory and sometimes infective processes. In patients with allergic rhinitis, the physiologic changes that result from exposure to allergens do not appear to be limited to the nasal mucosa or even to the upper airways.

Pre-existing allergic rhinitis is often present in patients who have acute bacterial rhino sinusitis and chronic rhino sinusitis. Also, children with AOM and OME commonly have a history of allergic rhinitis. Chronically inflamed tissues are more susceptible to contamination and they block normal drainage from the sinus cavities. Finally, allergic persons touch their faces often, which, when combined with the factors above, increases the risk of viral upper respiratory infection (URI) and may lead to bacterial infection. About 38 percent of patients with allergic rhinitis also have asthma, and 78 percent of patients with asthma have allergic rhinitis. It is thought that factors that cause inflammation of the upper airways may exert the same effect on the lower airways. However, although treating allergic inflammation in the nose may make the lower airways less likely to be hyper responsive, it alone does not constitute sufficient treatment for asthma.

Etiologic Factors for Allergy:-

Although asthma is a multifactorial condition, the strongest risk factor in the etiology of asthma is atopy (allergies, atopic dermatitis, and allergic rhinitis). An atopic individual has a significantly greater probability of developing asthma, and persons with a family history of atopic disease are at greatest risk. It is accepted that an immunological response to various allergenic stimuli, including pet dander, dust mites, cockroaches, fungi, and foods is a major triggering factor in asthma symptomatology

Free Radicals theory:-

There is ample evidence that allergic disorders, such as asthma, rhinitis, and atopic dermatitis, are mediated by oxidative stress. Excessive exposure to reactive oxygen and nitrogen species is the hallmark of oxidative stress and leads to damage of proteins, lipids, and DNA. Oxidative stress occurs not only as a result of inflammation but also from environmental exposure to air pollution and cigarette smoke. The specific localization of antioxidant enzymes in the lung and the rapid reaction of nitric oxide with reactive oxygen species, such as superoxide, suggest that antioxidant enzymes might also function as cell-signaling agents or regulators of cell signaling. Therapeutic interventions that decrease exposure to environmental reactive oxygen species or augment endogenous antioxidant defenses might be beneficial as adjunctive therapies for allergic respiratory disorders. (JAllergy.Clin.mmunol.002; 110:349-56.)

Food Allergy:-

1.Food allergy may manifest as asthma, rhinitis, urticaria, eczema or gastrointestinal symptoms such as abdominal pain, nausea, vomiting or diarrhea.

2. Skin prick tests are useful in detecting the causative food allergens.

3. Common causes of food allergy in India are dhals, egg, meat, sea foods, cooking oil, nuts and dry fruits, coconut, and citrus fruits.

4. Allergy to food additives (artificial colors and food preservatives) is also common and results of avoidance are very encouraging.

5. Immunotherapy is not recommended for food allergy. Avoidance is the currently recommended treatment for food allergies today.

Pratisyaya: - *In the samprapti of pratisyaya, Ayurvedic classics have given due* importance to *Vata Dosha*. *Dalhana, the noted commentator on Susruta samhita* explained *Pratisyaya* as a condition, in which *Tridosa* and *Rakta* move towards *Vata*, leading to nasal discharge and along with other clinical features of Pratisyaya.

So Pratishyaya is -

- A disease of Vata predominance.
- A disease, in which continuous nasal discharge is the main feature.
- A disease, in which Dosha accumulation mainly takes place in Uttamanga.

Allergic Rhinitis:-

1. Allergic rhinitis is the commonest allergic condition faced by a medical practitioner.
2. Rhinitis may present either alone or in combination with asthma.
3. Typical symptoms of allergic are sneezing, running nose and /or blocked nose. Early morning sneezing is commonly seen in dust allergy.
4. Patients have severe itching in the nose and to relieve this they rub the nostrils from below upwards with the palm of their hands. This action is called the 'allergic salute' and it results in a horizontal, pigmented line on the nose called Darrier's line.
5. Allergic rhinitis may also present with dark pigmentation and swelling on the lower eyelids; this is called "allergic shiners" and is caused by venous congestion.

Causes of Pratisyaya:-

1. Exposing to cold weather, open air and dust Excessive talking
2. Reversion of sleep habits
3. Use of very high or low pillows
4. Drinking water other than native areas
5. Excessive quantity of water intake
6. Excessive indulgence in coitus
7. Suppression of vomiting and sorrow
8. Suppression of natural urges
9. Indigestion
10. Anger

Clinical manifestation of Pratisyaya:-

1. Dryness of mouth
2. Continues sneezing
3. Impaired smelling
4. Pricking pain
5. Pain in teeth, temple area & head
6. Crawling sensation around eyes
7. Disturbance in voice
8. Slow inflammation
9. Nasal discharge (seasonal)

Management of Pratisyaya:-

Deepana and *Pachana* drugs, *Swedana, Amlayukta Ahima Bhojana, Payas - Ardraka Panam (Dalhana), Ikshu Vikara, Snehana, Swedana, Vamana, Gandusha, Dhuma, Laghu-Snigdha –Ushna-*

Adrava Bhojana, Yusha , Dhuma Sevana by *Mallaka Samputa* made up of *Sattu* mixed with *Ghrita.*

Conservative treatment includes

Avoid direct contact with air and wind cover the head with thick and warm cloth. It is important that all patients with allergic rhinitis under go screening pulmonary function tests to exclude latent asthma.

Principles of treatment:-

- Treatment is directed to pacify Vata & kapha
- Snehana, swedana, pradhamana & gandusha dharana
- Protecting head from cold by covering it with warm & thick cloths
- Panchamuli sruta Kshiram, **Chitrakahareetaki lehyam**, Agasthya Haritaki lehyam sarpi gudam & shadanga Yusham are practically effective inthis condition
- Pancha lavana siddha or vidaryadi gana siddha Gritam for nasya karma
- Pippali,svigru beejani, vidangam, marichani for avapedana nasya
- Maricham, Dadhi & Gudam oral administration
- **Dasamula katutrayadi kashayam**, **Vyaghradi kashayam**
- Kanchanara guggulu
- Mahalakshmivilasa ras, Nardiya Lakshmi vilasaras
- Sitopaladi churnam, Rasasindhuram, kaphakartari ras
- Intake of cool water in abundance at the time of sleep

Important management principles are regulating bowel habit with anulomak dravyas, Sleeping hours to be maintained, desensitizing the nostrils with nasya procedures and administration of rasayana like Chitraka haritaki and Agastyaharitaki for longer periods after sodhana with vaman procedures.

KASA: - Despite considerable advance in the understanding of cough, the effective management of patients with a chronic cough can be difficult. For the patient, a cough which persists can be associated with considerable distress and impaired quality of life. Ayurveda has superior advanges in the management of kasa than modern medicine.

Caraka defines *Kasa* as **–**

"Shushko Va Sa Kapho Va Kasanat Kasa Uchyate" Release of obstructed *Vayu* with the production of abnormal sound is called as *Kasa*. This may be dry (without secretions) or productive (with secretions), Cakrapani , noted commentator has elaborated on the word *Kasa* as **– *"Kasanaat Iti Yatoktagatimatvaat Tathaa Uraprabhruti Shaatanaat Cha Kasa Iti Anvartha Samjnayochyate"*** This means, the act with forceful expulsion of *Vayu* along with in-drawing and falling movement of chest wall in other words called as *Kasa*.

Causes of **Kasa:-**

1. Exposing to smoke
2. Regurgitation of Amarasa from Amasaya to Respiratory tract
3. Excessive indulgence in physical activity
4. Eating of foods which induce dry ness(Rukshata)
5. Regurgitation of ingested food
6. Suppression of sneezing

Clinical manifestations of Kasa:-

Prodromata:-

1. Feeling of husk filled throat and mouth
2. Itching in neck
3. Difficulty in deglution

General:-

1. Cough without Expectoration
2. Pain at flanks, chest and head
3. Continues hoarse voice
4. Dryness of chest, throat and mouth
5. Horripilation
6. Blurred vision

Management of *Kasa* *is* discussed in detail in Ayurvedic classics. Based on the *Rogi* and *Rogabala,* the mode of treatment has to be decided. Though both *Sodhana* and *Samana* therapies are mentioned for *Kasa Roga*. Avoiding the causative factors is always the first line of treatment. Later specific treatment can be planned according to the *Doshic* involvement. Internal medication should be chosen from vast collection of formulations in classics after considering *Roga-Rogi Bala* and *Samprapti* of the disease. The following are the most effective and successful formulae in clinical practice.

Agasthya rasayan, chitrakahareetaki rasayan, Vasakantakari lehyam, Vyaghri hareetaki lehyam, Dasamulakatutrayam kashayam, vidaryadi kashayam, sitopaladichurnam, Talisadichurnam, vyoshadigutika, lavangadivati, vidaryadi gritam, Dasamularistam, Vasa swarasa with Madhu, pippalyasava, Rasasindhuram, Sameerapannaga ras, Mahalakshmivilas ras.

Tamaka Swasa (Bronchial Asthma): - It is a chronic inflammatory disorder of the respiratory airways, characterized by increased mucus production and airway hyper-responsiveness resulting in decreased air flow, and marked by recurrent episodes of wheezing, coughing, and shortness of breath. It is a multifactorial disease process associated with genetic, allergic, environmental, infectious, emotional, and nutritional components. Because of their symptomatology the majority of individuals with asthma experience a significant number of missed work or school days. This can create a severe disruption in quality of life, often leading to depressive episodes. It also disrupts the lives of caregivers and family members of the affected individual. Asthma patients who have increased symptomatology at night (a significant portion) also tend to have disturbed sleep patterns and impaired daytime attention, concentration and memory.

There is also the possibility that the practice of vaccinating children has contributed to this increase in asthma incidence, although presently this theory has not been studied thoroughly. Investigators in New Zealand, which has one of the highest rates of asthma in the world, found that 23 children who had not been immunized with the diptheria/tetanus/ pertussis (DPT) and polio vaccines had no episodes of, or physician consultations for, asthma, whereas a group of immunized children had a 23-percent incidence of asthma.Researchers in England note similar results in a survey of 446 children. In a group of 203children who had not been immunized for pertussis, two percent had a diagnosis of asthma at eight years of age, compared to 11 percent of 243 who had been vaccinated for

pertussis (p=0.0005).However, Swedish researchers did not find this connection in a study of 9,000 children given either DPT or only the DT components.

Although asthma is a multifactorial condition, the strongest risk factor in the etiology of asthma is atopy (allergies, atopic dermatitis, and allergic rhinitis). An atopic individual has a significantly greater probability of developing asthma, and persons with a family history of atopic disease are at greatest risk. It is accepted that an immunological response to various allergenic stimuli, including pet dander, dust mites, cockroaches, fungi, and foods is a major triggering factor in asthma symptomatology. Estimates of the number of people with asthma who also have allergic rhinitis are as high as 80 percent. Some practitioners suggest they are the same malady, only in different areas of the respiratory tract and should be treated similarly. In one study, 79 percent of individuals with asthma also had chronic rhinosinusitis.

Extrinsic asthma (Atopic Asthma, early onset asthma):-Atopy is due to the genetically determined production of specific IgE antibody, with family history of allergic diseases. It is the major risk factor for asthma. Patients with asthma commonly suffer from other atopic diseases, particularly allergic rhinitis and atopic dermatitis (eczema). Some other environmental or genetic factor(s) predispose to the development of asthma in atopic individuals. Asthmatic reaction is characterised by a cellular infiltrate rich in eosinophil.

Sāmānya saṃprāpti* of *Śvāsa:- It is stated that *vāta* located in the *urah* after afflicting the channels carrying the vital breath *(Prāṇa vaha srotas),* gets aggravated and stimulates *kapha* which leads to the causation of *Śvāsa.* Further it is said that if *vāta*, predominantly associated with *kapha*, obstructs the channels carrying *prāṇa (Prāṇavaha* and *Udakavaha srotas)* and circulates all over the body then this obstruction aggravates *vāta* further causing *Śvāsa*.

***Viśiṣṭa saṃprāpti of Tamaka-śvāsa*:-** Regarding the *saṃprāpti* of *Tamaka-śvāsa,* Caraka narrates that the vitiated *vāta* after causing the obstruction in *Prāṇavaha srotas* spreads with in *pratiloma gati* and involving the neck and head region, which produces *Pratisyāya* by excitation of *kapha doṣa.* This *Kapha* causes obstruction at the site of the throat region and produces *Ghurghurukam śabda* when *vāta* passes through the same region. This results into an increase in the respiration rate resulting in disease of *Śvāsa,* which includes pain in the chest.

According to Vāgbhaṭa the vitiated *vāta* travels abnormally in the *Prāṇavaha*, *Udakavaha* and *Annavaha Srotases*. This *vāta* associated with *kapha* reaches upwards in the chest and throat, at that time the normal flow of air is affected which leads to production of *Śvāsa roga*. According to him this disease originates from the *āmāśaya*·

Suśruta explains that vitiated *prāṇavāta* combines with *kapha* gets *ūrdhva gati* and *produces Śvāsa*. In *Tamaka-śvāsa vāta* is *kapha-sanyukta,* may be through two different processes which ultimately convert in each other.

1. *Vāta* is in normal state and *kapha* is either vitiated with its own etiological factors like *śīta, guru, dadhi, āmakṣira etc. or viśamāṣana, viṣtaṃbhi bhojana* etc. can produce *mandāgni* and *mandāgni produces āma* and this *āma* produces *malarupa kapha.* This vitiated *kapha* in the *urah pradeśa* causes the obstruction in the normal path of *vāta (prāṇa)* it further leads to *āvaranajanya vāta prakopa* and *pratiloma gati* of *vāta (kaphapradhāna saṃprāpti).*

2. *Vāta* is vitiated through its own etiological factors like *apatarpana, raja, dhuma, vegāvarodha* etc. and by *dhātukṣaya* (due to chronic disorders), vitiated *vāta* causes contraction of *Prāṇa*

vaha srotas, which further produces *Pratisyāya* by excitation of *kapha doṣa*. Thus, leading to the presentation of *Śvāsa (Vātapradhana saṃprāpti).*

Causes of Tamaka swasa:-

1. Exposing to dust, smoke and open air
2. Exposure to cold weather
3. Drinking cool water
4. Excessive physical activity, coitus and lifting heavy weights more than ones endurance
5. Rukshahara, visamasana, amapradosa and atyapatarpanat
6. Dourbhalyath, marmaaghatath
7. Excessive purification by vamana and virecana
8. Secondary to atisara, jwarath, chardi, Pratisyaya, Ksata Ksaya,Rakta pitta, Udavarta, Visucya, Alasaka, Panduroga and visha
9. Consumption of nishpava, masha , pinyaka, pishta, saluki, Vishtambhi, vidahi & Guru ahara sevanath
10. Jalaja,Anupa mamsa sevana
11. Dadhi& Ama Kshira Sevanath
12. Abhisyandakara life style
13. Sleshma prakopa Ahaara
14. Kanthorasa Pratighatath
15. Vibandhasca

Clinical manifastations of Tamaka Swasa:-

1. Rhinorrhea
2. Wheezing
3. Intense episodes of breathlessness
4. Suppression dyspnoea causes blurred vision & tremors
5. Transient relief by expectoration
6. Difficulty in talking
7. Sleep disturbed by aggravated dyspnoea on supine posture
8. Increased movements on flanks when patient is supine posture
9. Feels comfort by sitting posture
10. Likes to eat hot/warm food
11. Periorbital swelling
12. Sweats on fore head
13. Dryness of mouth
14. Increased dyspnoea
15. Slow movements body
16. Breathlessness aggravates by clouds, rain, cool weather, eastern wind & kapha prakopakara causes

Allergic Asthma:-

1. Along with rhinitis, Asthma forms the largest group of patients in an allergy clinic.
2. Although wheezing is an important sign of asthma, all that wheezes is not asthma. Other conditions such as foreign bodies, left ventricular failure/pulmonary edema, Tumors, etc should be kept in mind. Besides, asthma may present only with cough; so do not ever discount cough.

1. Pulmonary function tests are important in assessing a patient with bronchial asthma**.** Simple spirometry and peak flowmetry could be done by an interested General Practioner in his/her own clinic

Management of Tamaka Swasa:

In Ayurveda avoidance of causative factors is first line of treatment. So all patients should follow wholesome regimen. *Caraka* emphasized that strong build patient with the dominance of *Kapha* should be treated with *Vamana* and Virechana therapy.

Prime focus of treatment is to achieve *homoeostasis* of vitiated *Dosha* .To achieve this, *Sodhana* and *Samana* therapies are described. Though *Sodhana* is better than *Samana*, but it cannot be applied in every individual. Hence before treatment one should consider about *Doshic* status as well as physical status of the patients. (*Ca.Ci*.17:121) *Caraka* has mentioned that (*Ca.Ci*.17:8) *Shwasa Roga* originates from *Pittasthana* so the *Sthanika Doshic Chikitsa* should be done first. Hence *Virechana* for Pitta *Dosha* is recommended, but *Virechana drugs* must be associated with *Vata and Kaphahara* properties. Patients who are strong and predominance of *Kapha* should be treated with *Shodhana Chikitsa* while patients who are weak, *Ruksha* and predominance of *Vata* should be treated with *Samana* therapy.

The medicaments, food and drinks which control *Vata* and *Kapha* with *Ushna* property and are specially *Vatanulomana* should be given in *Shwasaroga*. The predominant *Doshas* of *Tamaka Shwasa* are *Vata* and *Kapha*. It is important to note that the assessment of the *Dosha* is essential while treating the disease. *Vata* and *Kapha* are contrary to each other. In the management of Tamaka Shwasa, it is customary to note that when *Vata* is obstructed by *Kapha*, just by increasing *Vata*, *Kapha* will automatically alleviate and *Vata* will be free to move in its course. When *Vata* is much aggravated than *Kapha*, treatment to increase *Kapha* will help to correct *Vata*. The antagonistic property of *Vata* and *Kapha* is a physiological phenomenon, after correction of this imbalance, the *Shwasaroga* can be relieved. To achieve the balance of *Dosha*, the *Doshas, Vata* and *Kapha* should be treated simultaneously. *Vata Dosha* plays an important role in the *Samprapti* of *Tamaka Shwasa*; Hence *Vatanulomana Chikitsa* is always preferable.

Charaka emphasized that *Brumhana* is better than *Karshana* in the management of *Tamaka Shvasa*. In *Tamaka Shvasa* vitiated *Kapha* obstructs the movement of *Vata* causing *Vatprapkopa* & breathlessness. Hence, Vagbhatta had narrated that there must be the use of *Samshamana Dravya* in the form of *Kashaya, Avaleha* and *Ghrita* to relive the *Vatprakopa* causing after *Samshodhana* (AH-chi 4/18).It acts as *Brumhana* or *Sthanbalya* to *Pranvaha Srotasa*.

- Application of oil over chest and hot fomentation
- Snigdha lavana yukta tail for internal use
- Mridu vatanulomanam
- Vamana and virecana karma
- **Agasthyahareetaki lehyam**
- Dasamula kashayam with pippali
- Sitopaladi churnam, Swashkuthararas & sameerapanngaras

- Kanakasava, pippalyarista, somasava
- Brihat swasa chintamani ras, Mahalakshmivilas ras

Ayurveda accepts that Tamak swasa is a yapya vyadhi, hence long term treatment protocols with periodical sodhan with maintenance of excerbations with saman treatment are ideal approaches. Anulomak drugs are going to pay prime role in the management. Rasayan drugs like Agastyahareetaki must be choice of prescription for long term use. It is pertinent to note that caring for adopting regulated lifestyle and diet regimen are very essential to overcome the exacerbations.

Research findings on herbs/ massage/yoga in allergic respiratory disorders

1. Tylophora asthmatica:-One botanical that has undergone clinical scrutiny and shown success in treating asthma is an Indian plant called Ajadveshi (*Tylophora asthmatica* also known as *Tylophora indica).* The leaves of the plant are used in Ayurvedic medicine for the treatment of asthma, bronchitis, and arthritis. It can have an irritant effect on the gastrointestinal mucosa, and in large doses will act as an emetic. In smaller doses, however, it acts as an expectorant, anti-inflammatory, and may provide benefit in asthma cases. Alkaloids from this plant have been isolated and identified as tylophorine and tylophorinine. These alkaloids are believed to be responsible for the plant's therapeutic efficacy. In a rat study, tylophorine inhibited systemic anaphylaxis, adjuvant-induced arthritis, and mast cell degranulation. It is suggested that Tylophora might have a direct effect on the adrenal glands, thus increasing endogenous steroid production and anti-inflammatory activity. Ingestion of Tylophora leaf in asthma patients resulted in decreased nocturnal symptoms, as well as significant improvements in lung function indices compared to placebo in a double-blind, crossover study. These improvements continued for weeks beyond the short-term (7-day) trial period. Similar long lasting results were reported in a study of 110 asthmatics. These patients chewed and swallowed one Tylophora leaf per day for six days. At one week, 62 percent of individuals taking Tylophora had moderate to complete symptom relief, which lasted for weeks after the trial. A significant percentage of subjects complained of nausea, although there tended to be a positive correlation between nausea and degree of symptomatic improvement. To date, no nutrient or other botanical has demonstrated a similar long-lasting effect after short-term dosing.

2. Boswellia serrata (sallaki):-The gum resin of *Boswellia serrata*, also known as sallaki, has been used in Ayurvedic medicine for centuries. Leukotrienes are elevated in asthma and are a major component of inflammation and bronchoconstriction. The 4-series leukotrienes (LTB4, LTC4, LTD4, LTE4) are derived from arachidonic acid in cell membranes via activity of the enzyme 5- lipoxygenase. Components of Boswellia called boswellic acids have been found to specifically inhibit 5-lipoxygenase. In animal studies, Boswellia not only inhibited LTB4 production, but also prevented leukocyte migration to inflammatory sites. Due to 5-lipoxygenase inhibition, Boswellia should be a beneficial component of asthma therapy. A double-blind, placebo controlled study of Boswellia in asthma looked at just this issue. Forty patients were treated for six weeks with a Boswellia extract (300 mg three times daily). Symptomatic improvement (dyspnoea, wheezing) was seen in 70 percent of patients, as were objective measurements of lung function (FEV1, FVC, PEF). A reduction of eosinophilia was also noted. Twenty-seven percent of participants in the Placebo group

showed improvement. This is a very promising study, showing both subjective and objective improvement in asthma. The new anti-leukotrienes medications block leukotriene receptors, whereas Boswellia blocks the formation of leukotrienes. Either way, the end result should be a decrease in leukotriene-induced inflammation and Broncho-constriction. *In vitro* testing revealed Boswellia specifically, and in a dose-dependent manner, blocks the synthesis of pro-inflammatory 5-lipoxygenase products, including 5-hydroxyeicosatetraenoic acid (5-HETE) and leukotriene B4 (LTB4), which cause broncho-constriction, chemotaxis, and increased vascular permeability. Other anti-inflammatory plant constituents, such as quercetin, also block this enzyme, but they do so in a more general fashion, as an antioxidant; whereas, Boswellia seems to be a specific inhibitor of 5-lipoxygenase.Boswellia has also been observed to inhibit human leukocyte elastase (HLE), which may be involved in the pathogenesis of emphysema. HLE also stimulates mucus secretion and thus may play a role in cystic fibrosis, chronic bronchitis, and acute respiratory distress syndrome.

3. Yoga Breathing :-Yoga, which has a strong emphasis on breathing techniques, has been demonstrated to benefit asthma patients Yoga training programs enrolling a total of 715 patients demonstrated significant improvement in asthma symptoms, medication usage, peak flow rate, and exercise tolerance. It appears the breathing techniques utilized are responsible for the beneficial effects seen in asthma, not the yoga postures alone.

4. Massage: - Asthma patients can also benefit from regular massage therapy. Massage relaxes the musculature and reduces anxiety. A study of children with asthma who received massage daily for 30 days demonstrated increased peak airflow and FEV1 during the course of the study.

Avoidance measures:-

Avoidance measures for allergic diseases have to be specific, depending upon the causative factors. However, certain avoidance measures for the home and place of work of an allergic individual could be generalized.

1. Bedding should be of synthetic material such as foam. Pillows and mattresses filled with cotton or feathers must be eliminated.
2. There should be no carpets in the place where the allergic individual lives or works. Carpets act as reservoirs of “house dust mites” and vacuum cleaning can remove only a small percentage of the dust from carpets. Besides, India is a warm country and carpets are really not required here, especially if they cause or aggravate allergies.
3. There should be no pets in the house of an allergic patient. Regular washing of pets has been attempted with no significant success in reducing symptoms. IT for animal danders has not proved to be beneficial so far. Although, removing a pet may cause psychological trauma in some patients, there is really no other therapy which can result in optimal reduction in symptoms.
4. Indoor plants should be removed from the house and place of work. Besides producing pollen, these plants also attract insects and dust which could aggravate or result in allergic reactions.

5. Regular pest control should be done in both, the house and place of work of an allergic person. Insects like cockroaches, house flies and mosquitoes are very common causes of allergies in India and must be exterminated.
6. Plastic netting on the doors and windows of the house act as a mechanical barrier in preventing entry of dusts and insects.
7. If there is an allergic person in the house (especially an asthmatic), then other members of the house should co-operate by not smoking. it is virtually impossible to generalize food precaution in allergy and these would definitely depend on what foods are causing allergic reactions in a given individual

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