THE IMPORTANCE AND APPLICABILITY OF SROTASA IN THE TREATMENT OF DISEASES

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INTRODUCTION

All the structural entities in the human body cease either to maintain continuity of their manifestations or undergo diminution in the absence of respective channels of circulation (srotasas). The channels of circulation carry such of the tissue elements as are undergoing transformation from these previous states of the next state (for example, rasa is transformed as rakta etc.) and reach their destination respectively. As without tissue transformation, the body cannot be nourished and tissue diminution is the main factor in causing any disease. And so the srotasa plays a very important role in body building and its decay.

Srotasa occupies an important position in the development of conceptual frame of work of Ayurveda. As Ayurveda employs holistic and personalized approach to both health and disease, it is essential that these srotasa (macro and micro channels) remain intact for normal function of the body.

The importance and applicability of srotasa in the treatment of diseases can be explained in many ways which are described later. These are:

1. Srotodushti as the cause of disease whereas Srotoshuddhi as the treatment of disease.
2. Involvement of Srotasa in Pharmacology.
3. Srotasa in the therapeutic management.
5. Srotasa in other treatment methods.
SROTODUSHTI & SROTOSHUDDHI

Srotasa are responsible for production and nourishment as well as for the decrease of the humours and by thus they are also responsible for health and disease, as the humours (doshas) are. The holistic integrative systems approach of Ayurveda involving dosha, dhatu, mala, srotasa in broad aspect and body, mind and soul in gross aspect is a pivotal attribute.

According to Ayurveda, whole body is made up of srotasa which transport all type of materials in the body.

Acharya Charak describes that the elements which compose them, the elements they carry, the elements to which they provide nourishment and their abodes (muscle, etc.), they are different from these channels.

Disease is defined as a state of disturbance of homeostasis in dosa, dhatu, agni, mala, indriya and manas resulting in the physical and psychological discomfort. These doshas (humours) viz, vata, pitta, and sleshma are responsible for diseases. Various channels (srotasa) of the body, which are the smallest units of the body. And doshas, dhatus and malas are carried through these srotasas are also affected in diseases.

The foods and regimens that promote morbidity (aggregation of dosas) and go contrary to the well-being of dhatus (tissue elements) vitiate the channels. Affliction of these channels leads to the vitiation of the tissue elements residing there or passing through with them, as vitiation of one leads to the vitiation of another. The vitiated channels and tissue elements (dhatus) vitiate, other channels and dhatus respectively. The entire phenomenon right from the vitiation of dosa to the manifestation of the disease is known as Samprapta (Pathogenesis).
Pathogenesis of diseases has 6 stages known as Satkriyakala. Acharya Susruta has mentioned six phase of the increased humours (dosa vriddhi). These are different stages of development of disease.

1. SANCHAYA (Accumulation) – The first kriya kala: Increase of doshas in their own sites is called sancaya and produces dislike for things which are causes of increase and liking of things of opposite qualities. The accumulation of dosas is caused owing to amavastha in the body occurring as a result of mandagni. Due to ama, the different channels (srotamsi) of the body are blocked and the circulation of various matters slows down, which is felt by the patient at the onset of some symptoms.

2. PRAKOPA (Provocation) – The second kriyakala (Vitiation or aggravation of doshas): In this stage, doshas are aggravated as they leave their original sites.

3. PRASARA (Propagation) – The third kriyakala (Spread of vitiated doshas): The doshas leave their normal sites and start spreading in the body through srotasa (channels) ordinarily in accordance with the pattern of three rogamarges viz. sakha, marmasthisandhi and kostha. In the advanced stage of the spreading of dosas, the channel is disturbed. At this stage, the symptoms of any particular disease of dosas, the channel is disturbed. At this stage, the symptoms of any particular disease are not present but pathogenesis starts taking an irreversible turn, as no prasama of dosas is possible by this time. The principle of treatment at this stage is to correct the site (organ) into which the unwanted doshas has entered. At the third kriyakala or prasaravastha, the morbidities are somehow at the floating stage in the body and have not yet been localized.

4. STHANA SAMSRAYA (Localization) – The fourth kriyakala (Stage of localization of the morbid): This stage is actual condition of the generation of the disease and known as Purvarupa or primordial stage of the disease and this stage is also known as Vyadhi janamkala. At this stage, the process of interaction between morbid elements and tissues (dosha-dushyasammurchhana) takes place, the availability of a weak or predefective site is essential for the localization (sthana samsraya) of the morbid. Such a defect has been described as Kha-vaigunya in Ayurvedic literature. The obstruction and other deformities of the channels lead to the manifestation of various diseases.

5. VYAKTAVASTHA (Manifestation) – The fifth kriyakala (Stage of manifestation): The disease assumes full bloom and characteristic, stable clinical features of the disease.
appears, which are known as Rupa and the stage of Vyadhidarshana.

6. BHEDA (Complication/Chronicity) – The sixth kriyakala (Stage of complications): The dosa will move toward the sixth and the last stage of treatment i.e., Bhedavastha or the stage of complication. The term bheda also points out to the phenomenon of bursting out of a disease into complications or upadrava leading to the development of other associated ailments. This stage also refers to the chronicity of a disease. This stage is thought to be hardly curable, rather incurable.

UTILITY OF KNOWLEDGE OF KRIYAKALA

The object of Ayurveda i.e., positive and holistic health can be achieved by the maintenance of the equilibrium of the tissues elements with various other factors. By this knowledge, treatment becomes easier, as the disease could have been diagnosed at an earlier stage. The concept of satkriyakala is very useful to intervene at the initial stage of pathology to prevent the progression of disease and its complications. Therefore, emphasis has been given in Ayurveda to prevent srotodushti (vitiation or srotas).

SROTOVIKRITI (Signs of vitiation of the channels of circulation).

The main signs of the vitiation of the srotasa are.

अतिप्रवृत्ति: सदृशो वा सिराणा ग्रन्थयोदिपित । विमारगमनं चािपि स्त्रोतसां दुष्टि लक्षणम्। [8]

1. Atipravritti: Increased flow of the contents of the channel.
2. Sangah: Obstruction of the flow of the content of the channel.
4. Vimargagaman: Dosas getting aggravated (due to various causes) enter channels of rasa dhatu and circulated all over the body.

These are accumulated in the places due to khvaigunya (obstruction, etc.) in the proper circulation. Thus, dhatu dushti (vitiated humours) leads to obstruction of the channels (srotodusthi) and such places become the site of the origin of the diseases.

SROTASA & PHARMACOKINETICS

Srotasa are macro and micro channels starting from the huge Gastro-intestinal tract to the micro capillaries. Ideal treatment according to Ayurveda is one which cures the disease without causing adverse effects. The approach of Ayurvedic principles of management is holistic and individualistic. Treatment of any disease can be broadly classified into medicinal and surgical treatment. Medicinal treatment comprises of the food, lifestyle and drugs.
Drug is the single active chemical entity present in a medicine that is used for diagnosis, prevention, treatment/cure of a disease. And this is only possible in the presence of channels. Whether the drug administered is an Ayurvedic drug or an allopathic one, all the drug action is similar involve channels or srotasa from the drug administration to their action.

Pharmacology is the science of drugs. It encompasses all aspects of knowledge about drugs. The two main divisions are Pharmacodynamics and Pharmacokinetics. Pharmacodynamics includes physiological and biochemical effects of drugs and their mechanism of action at macromolecular/subcellular/organ system levels. Pharmacokinetics refers to movements of the drug in and alteration of the drug by the body which includes absorption, distribution, binding / localization / storage, biotransformation and excretion of the drug.

All pharmacokinetic processes involve transport of the drug through channels (srotasa). Movement of drug in, through and out of the body takes place through srotasa. Once a drug has gained access to the bloodstream, it gets distributed to other tissues that initially had no drug, concentration gradient being in the direction of the plasma to tissues.

Srotasa (Raktavaha srotasa, Annavaha srotasa) plays a major role in the distribution of drug all over the body.

Absorption is the movement of drug from its site of administration into the circulation. Thus, srotasas (Raktavaha srotasa, Rasavaha srotasa) are very important for absorption process in the pharmacokinetics.

Biotransformation means chemical alteration of the drug in the body. It is needed to render nonpolar (lipid soluble) compounds polar (lipid insoluble) so that they are not reabsorbed in the renal tubules are excreted. Excretion is the passage out of systematically absorbed drug. Drug and their metabolites are excreted in urine (through Mutravaha srotasa), faeces (through Pureeshvaha srotasa), exhaled air (through Pranavaha srotasa), saliva (through Ambuvaha srotasa), sweat (through Swedavaha srotasa) and milk (through Stanyavaha srotasa). Srotasa are a key part in the biotransformation and excretion of the drug.

Therefore, Pharmacokinetics of the drug is not effective in the absence of srotasa and these collectively work to produce the effectiveness of the drug.
SROTASAS IN THERAPEUTIC MANAGEMENT

Taking the human being as a whole, the Ayurvedic preventive and therapeutic approaches aim at homeostasis of the integrated milieu – which prevents the srotodushti.

There classical therapeutic streams advocated by Ayurveda are-
1. Daivyavyapashraya chikitsa (spiritual therapy)
2. Yuktiyapashraya chikitsa (rational treatment)
3. Satvavajaya chikitsa (psycho-behavioral therapy)

Spiritual therapy involves the Manovaha srotasa. Rational treatment involves the srotasa related to the systemic disorder. Psycho behavioral therapy involves the Manovaha srotasa and many more.

SROTASA AND CURATIVE TREATMENT

The curative treatment consists of three major constituents: Ahara (food), Vihara (lifestyle) and Aushadha (drug / medications).

Ahara mainly includes the Annavaha srotasa, Rasavaha srotasa. Vihara includes all the srotasa related to the organ system involved in that particular action. Ausadha includes the Raktavaha srotasa for its action.

SROTASA AND OTHER TREATMENT METHODS

The Ayurvedic treatment methods can be grossly divided into three types.

1. Samshodhana is the modality of treatment by which effort is made to remove disease causing factors like metabolic waste / toxins from the body. This majorly includes Annavaha srotasa, Swedavaha srotasa and Pureeshvaha srotasa.

2. Samasana is the modality of the treatment by which the disease causing factors are pacified inside the body and this is achieved through three types of therapies viz. food, lifestyle and medicine.

3. Nidaan Parivarjana is the prevention of the etiology.

CONCLUSION

Srotasas and its applied science in the treatment of diseases are of great significance. The key parts of srotas and its application is understandable by srotodushti and srosuddhi. Correlating it with the modern medicine, srotasa are the transporting channels all throughout the body and thus srotasa plays a very important role in treatment through drugs and their
pharmacokinetics. Therapeutic management, curative treatment and many other forms of treatment is possible only through the srotasa to achieve the most effective results of the treatment. Srotasa being the important in the whole body can't be neglected. So, the preventive treatment is also must for the proper management of srotasa. In the case of srotodushti, its management signifies the involvement of srotasa in the whole body as their treatment is similar to that of the systemic diseases. Therefore, we can say that, each and every entity in the human body is neither produced nor deceased in the absence of srotasa.

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