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RaktawahaStrotas and its Correlation with Mulasthan as a Yakrit (Liver)

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ABSTRACT

“Strotas are the channels, which are widely spread all over the body, where circulation of the fluid occurs irresistibly and continuously. As per Ayurveda, Strotas are the important aspect of study like that of Tridosh and dhatu. Dhatus are created in the Strotas with the help of Doshas. Strotas are responsible for all the formation of new cells and tissues as well as dhatu formation in our body. All the metabolism, anabolism and catabolism are carried out in Strotas. SushrutokataRaktavahaStrotas, the Mulasthana are Yakruta, Pliha and Raktavahinyadhamnya. It can be considered that liver and spleen along with blood vessels which are supplying blood to them which is known as portal circulation. A study was conducted on study of structural and physiological aspect of liver and correlation with RaktavahaStrotas. In this study 50 patients of liver diseases was selected, in these patients, Raktavahadushti has been recorded and it has been found that, in the study the pathology of RaktavahaStrotas causes deformity in mulasthanaYakruta. Any pathology in Raktadhatu (blood) causes disturbance in MulasthanYakrut. MulasthanaYakrut (liver) causes jaundice which is described in Ayurveda as PanduHalimak and other diseases as per described in Ayurveda.

keywords: Yakrut, Liver, RaktavahaStrotas, Pliha, Raktavahinyadhamnya.

INTRODUCTION

Acharya Charaka has defined Strotas as transporting passage of dhatus undergoing transformation.[1] Acharya Charaka’s definition of Strotas as “srawanatsrotamsi” means to exude, to ooze, to filter, to permeate.[2] Chakrapanidutta, the functions of srotamsi serve as conduits through which both Prasadadhatu (nutrient) as well as mala dhatu (waste products and products of degradation) are transported and as structures through the pores of which Prasad dhatus and malas to and from the sthai (stable)dhatus. In other words, the channels of transport, entry and exit of

both the poshakdhatus and malas are not distinct and different entities, that is to say, the channels, which serve as vehicles of transport of both Prasad and mala dhatus, also serve the purpose of their egress and ingress.

Acharya Charak has described 13 Strotas in pair [3] and Sushruta has described 11 Strotas as per Ayurved Samhitas the dushti of Strotas causes diseases. [4] That’s why study of normal Strotas is more important to understand the pathology of the disease. The utpatti (origin) of Strotas i.e. the formation of Strotas has been described in Sushrut Samhita Sharirasthanam.

Sushruta has excluded sira and dhamani from scope of Strotas and compared the strotas to the fine channels present in the lotus stem through which fluids circulate and exude. [5]

Raktavaha Strotas refers to channels involved in blood circulation. Sushrutokata Raktavaha Strotas, the mulasthana Yakruta, pliha and Raktavahinya dhamnya. [6] It can be considered that liver and spleen along with blood vessels which are supplying blood to them which is known as portal circulation. Sushruta called Yakrita as a Raktadharakala and Raktashaya. [7]

Yakrit Pliha Utpatti and Raktavaha Strotas

According to Sushruta, the organ liver is formed from the blood (Rakta) during the embryonic stage.[8]It is considered to be the main site of blood, as the site of colour responsible –bile variety (ranjaka pitta) even before body dissection and circulatory study in modern medicine. According to AcharyaCharaka in relation to the development of body parts, Yakrit is developed or generated from Matrijabhava.[9], According to Acharya Arunadatta, Samana Vayu, Dehoshma, and Rakta Dhatu take part in the formation of Yakrit, Pleeha.[10] it is accepted by all the Acharyas there is major role of Rakta Dhatu in the development of Yakrit (liver) and Pliha(Spleen).

Causes of vitiation of Raktavaha Strotas

Vidaahee annapaana – foods and drinks which cause burning sensation after their consumption (corrosive foods and drinks), Snigdhahaahara – oily foods, Ushnaahara – hot foods, Drava aahara – liquid foods, Aatapa – exposure to sunlight, Anala – exposure to fire.[11]

AIM OF STUDY

To establish the correlation between RaktavahaStrotas dushti with its MulasthanYakrit (Liver).

RESULTS AND OBSERVATIONS

A study was conducted on liver diseases in total 50 patients. In these patients, Raktavahadushti has been recorded. Out of these 50, 35 are male and 15 are female. Out of these, 12 patients had pathology in the liver i.e. doshasanchay (Infective hepatitis). Excess of alcohol causes damage to liver cells and this was recorded in 15 patients. Obstructive pathology was found in 10 patients. There may be

pathology in the liver due to blood cells or Raktadhatu and it was recorded in 13 patients.

A study was done on the basis of structural and physiological aspect of liver. It has been found that as per Ayurveda it is a site for ranjjak pitta which is related with glycogenesis and glycogenolysis. Similarly, it is related with removing dead RBC's and collection of hemoglobin which is stored in the liver.

It has been found that, in the study the pathology of Raktavaha Strotas causes deformity in mulasthanYakruta. Any pathology in Raktadhatu (blood) causes disturbance in mulasthan Yakrut. MulasthanYakrut (liver) causes jaundice which is described in Ayurveda as Pandu Halimak and the diseases as per described in Ayurveda. It observed that diseases of liver cause Raktavaha Strotas dushtilakshana.

DISCUSSION

Each Strotas has a Strotomula (root), a Strotomarga (passage) and Strotomukha (mouth or opening). Raktavaha Strotas refers to channels involved in blood circulation. Sushrutokata Raktavaha Strotas, the mulasthan Yakruta, pliha and Raktavahinya dhamnya. modern science also supports Ayurvedic concept of Raktavaha Strotas.

In modern human embryology the mesoderm produces septum transversum from which liver develops. On the other hand, the mesoderm also produces mesenchymal cells, which in turn produce myoblast, chondroblast, lymphoblast, hemocytoblast, etc. The blood cells develop from hemocytoblast and lymphoblast.[12] So we can conclude that liver and blood is formed from the same, i.e. mesoderm. The umbilical and vitelline veins open at the septum transversum; due to this, the septum transversum is rich in blood supply. Hepatic bud grows in the septum transversum and, due to this, the umbilical and vitelline veins are broken up forming the liver sinusoids. It indicates that blood plays an important role in the development of liver.[13]

The fetal liver has major hemopoietic function up to the first and second trimesters. In developing embryos, blood formation occurs in aggregates of blood cells in the yolk sac, called blood islands. As development progresses, blood formation occurs in the spleen, liver and lymph nodes. When bone marrow develops, it eventually assumes the task of forming most of the blood cells for the entire

organism.[14] So Dushti of Mulasthana i.e. Yakrita causes different Vyadhi of Raktavaha Strotas Guda Medhra Paakaha, Pleehaa Vicar, Gulma, Vidradhihi, Neelikaa, Kaamalaa, Vyangaha, Piplavaha, Tilakaalakaha, Dadruhu, Charmadalam, Shvitram, Paamaa, Kotha, Asra and Mandala.[15]

CONCLUSION

After overall observation in the patients it was observed that liver is the mulasthan in Raktavaha Strotas dushti. It was observed in patients that etiopathogenesis of Raktavaha Strotas occurs first and then in the mulasthan Yakrut. The disease of

liver i.e. Yakrut vikarjanya vyadhi is described in Raktavaha Strotas but the dushti of Yakrut (Pathology of liver) causes the dushti of Raktavaha Strotas i.e. mulasthan vikruti pathology in the mulasthan causes damage in the Strotas. As per described in Ayurveda Samhita, it has been found that the pathology in liver cause Raktavahadushti and vice versa. Further study is needed to find out mictochanges in srotas and implication in clinical studies.

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