

**A REVIEW OF ORGANOGENESIS IN AYURVED****\*Dr. Madhuri A. Mahadar (M.D.Ayurved)**

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Maharashtra (India).**ABSTRACT**

Ayurveda has described organ development in Garbhavakranti. Sushruta has elaborated the constituents necessary for organ development. Various other ayurvedic texts have mentioned month wise foetal development but not organ development. Sushruta has mentioned avayautpatti (organ formation) in detail in Sharirsthan of Sushruta Samhita.

**KEYWORDS:** Avayva utpati, Tridosha, Rakta dhatu, Garbha.**INTRODUCTION**

Garbhavakranti is described by Charak and Sushruta and Vagbhatta in Sharirsthan. All these acharyas have explained detailed month wise Garbha development. Further they have explained the regimes which should be followed by mother and Do's and Don'ts during pregnancy period.

But Sushruta has explained in detail about the organ development and about the constituents involved in organ formation. Tridosha concept, the fundamental principle of Ayurved; is applied during organ formation. Garbha is result of union of shukra (sperm) and aratva (ovum), which have all the doshas in the normal state, these Tridosha comes into force for development of Garbha, i.e. for origin of the body.<sup>[1]</sup> (Su.Su.21/3). Vata, Pitta and Kapha are the causative agents of origin of body and they support the body when in normal state and when vitiated are the cause of dissolution of the body. Thus the body always in origin, existence and dissolution are associated with these three along with the Rakta as the fourth one.<sup>[2]</sup> (Ch. Su.1/57, 16).

Charak has considered the movement of dosha of two types normal and abnormal, among this Pitta having the nature of heat and is responsible for digestion in living beings; i.e. it is responsible for transformation. But this Pitta when vitiated causes many disorders. Kapha is responsible for strength when normal it is said to be Ojas but when abnormal it causes various disorders. Likewise all movements are due to normal Vata, it is also considered to be causative factor for shape of foetus, structural formation of all bodily dhatus.<sup>[3]</sup> (Ch.Su.12/) Thus the Tridosha concept is seen in Garbha vikas.

Sushruta has quoted that, the body does not come into existence without Kapha, Pitta, Vata or even Rakta; the body is constantly supported by all the four.<sup>[4]</sup> (Su 21/4).

Sushruta has given prime importance to Rakta in formation of Avaya utpati, he has mentioned it to be main (root cause) originating factor of body. He has emphasised that Rakta should be protected carefully and considered it to be life.<sup>[5]</sup> (Su 14/44).

While giving importance to Rakta both Sushruta and Charak has considered Rakta to be dosha.

3) Dosha share some common attributes, therefore the therapy administered for the alleviation of one dosha is likely to aggravate the other dosha. Hence during the course of treatment utmost care should be taken not to aggravate the vayu, because it is the most predominant dosha, involved in pathogenesis of disease.<sup>[6]</sup>

Rakta is considered to be one of ten seats of prana.<sup>[7]</sup> (Ch.Su.29/3).

After taking the above references into consideration Sushruta has given lot of importance to Rakta and considered it to be as main constituent in avayautpatti.

Rakta and Kapha are acted up to by vayu and pitta and various forms of body, srotas, antra and guda are originated. Thus Tridosha concept is also seen in avayautpatti. After mentioning the description Sushruta has given formation of following organs.

### **1) Yakrut and Pliha are derived from Rakta (shonit).<sup>[8]</sup> (Su Sh 4/25)**

There is similarity between colour, function of Rakta and Yakrut and Pliha. Further from chikitsa point of view this relation also is seen true. Hence according to Satkarya vada concept Yakrut and Pliha are derived from Rakta holds true.<sup>[9]</sup> (Su.Su.14/4-5).

Rasa, even being watery attains (red) colour when it goes to Liver and spleen.

Yakrut and Pliha are originated from Rakta. Location of Rakta is Yakrut and Pliha, the Rakta situated there itself supports the remaining sets of blood.<sup>[10]</sup> (Su Su 21/16). Hence from above discussion we can see the role of Rakta in Yakrut and Pliha; hence we can conclude that it is the main factor for development of these organs.

**2) PhuPhus: is originated from Shonitphena.<sup>[11]</sup> (Su Sh 4/24)**

In Sharangdhar Samhita,<sup>[12]</sup> the author has described the mechanism of Shawasan in Phuphus. Recent modern texts also describe the gaseous exchange takes between capillary blood which is separated by semipermeable membrane, which is very thin and transparent. Hence the description can be justified so functionally we can see the correlation between Phuphus and Shonitphena.

**3) Unduka: is originated from Shonitkitta prabhava.<sup>[13]</sup> (Su Sh 4/24)**

Ayurveda has described Purishdharakala in Unduka. According to Karyakarnabhava (concept),<sup>[14]</sup> according to Karna (CAUSES) Karya (RESULTS) are seen. This theory enables us to understand why unduk is derived from raktakitta; during digestion sarakitta vibhajan takes place in purishdharakala (site unduk) kitta is separated from rest of digested food it forms the fecal material which is then excreted from the body and the Sara (rasa) goes to Yakrut and Pliha to get transformed in Rakta. This explains us the reason of derivation of unduka from raktakitta.

**4) Vrikka: is originated from Raktameda prasada.<sup>[15]</sup> (Su Sh 4/30)**

Vrikka is included as moolasthan of medovahasrotas hence meda is formed transported in this srotas and as Vrikka is origin of this srotas hence meda is taking role in formation of Vrikka along with Rakta.

**5) Vrushna: is originated from Mansaasrukakaphameda prasada.<sup>[16]</sup> (Su Sh 4/30)**

Vrushna is considered as moolasthan of sukravahasrotas, Sushruta has given Kapha and Rakta in formation of srotas.

**6) Hridya: is originated from Shonit Kapha prasada part.<sup>[17]</sup> (Su Sh 4/30)**

Shonit and Kapha are basic ingredients in formation of srotas (channels). Hridya is considered to be moolasthan of both Pranavaha and Rasavaha srotas in which both Prana

(vayu) and Rasa (& Rakta) circulation is seen. Hence for circulation, pumping of these prana vayu and rasarakta; Hridya is said to be originated from Shonit and Kapha.

### **7) Antra (Intestine), Basti (bladder) and Guda (anus):**

The antra (intestines), the Basti (bladder) and Guda (anus) of the foetus are formed out of essence of Rakta and Kapha, baked by Pitta into which vayu enters as well. As fire fed by draughts of air refines the dreg of golden ore and transforms it into pure metal, so Rakta and Kapha acted upon by the heat of pitta are transformed into the shape of intestines in the abdomen.<sup>[18]</sup> (Su Sh 4/26).

### **8) Jivha (Tongue)**

The Jivha (tongue) is made of the essence of the Mansa (flesh), Rakta and Kapha.<sup>[19]</sup> (Su Sh 4/27) Tongue is both seat of Dhanyendriya (Sense organ) and Karmeindriya (Functional organ). The sense of taste is carried out by tongue. Further tongue also helps in speech. Hence there is need of transportation of both rasa (rasa graham) and speech (shabda graham). Therefore Kapha and Rakta are needed to form channels (srotas ) as tongue is a muscular organ mansa (flesh) all the three form the root cause for its development.

### **9) Peshi**

The vayu, combined with heat (pitta) in adequate proportions, rends thorough the channels into the flesh, and transforms them into Peshi (muscles).<sup>[20]</sup> (Su Sh 4/28).

### **10) Sira and Snayu**

The vayu, by taking off the oily principles of meda (fat) transforms them into Sira and fibrous tissues Snayu, the under baked (mrudu) ones being converted into siras and the over baked (khara) ones into Snayu.<sup>[21]</sup> (Su Sh 4/29).

### **11) Ashya**

The hollow viscera of the body are developed by the repeated action of vayu.<sup>[22]</sup> (Su Sh 4/29).

Sushruta has also quoted a discussion on which organ developed first<sup>[23]</sup> (Su Sh 3/41). According to these discussions different learned scholars have difference in opinion about the organs which were considered to be developed first. But Acharya Dhanwantari has stated the development of all bodily organs are developed at a time i.e. simultaneous, 'yugapat.' He has further stated that due to miniature form of organs, they are not revealed simultaneously. But Sushruta finally mentioned Dhanwantari 's view that all parts and subparts arise

simultaneously, but they are not observed because of minuteness like bamboo sprout and mango fruit. Similarly in early stage of foetus all parts of subparts develop simultaneously but are not observed due to minuteness and the same become prominent in course of time.<sup>[24]</sup> (Su Sh.3/32).

Charak Samhita also states that development of all organs is at once<sup>[25]</sup> (Ch Sh 6/21). As all organs of foetus are rooted in heart and also some other entities are located there, there can be no appearance of other entities earlier than heart so simultaneous appearance of all organs preceded by heart is concluded. All entities, infact are interlinked so they should be viewed with correct perspective.<sup>[26]</sup> (Ch Sh 6/21).

## CONCLUSION

Thus from above discussion we can conclude that Ayurveda has considered Vata, Pitta, Kapha and Rakta as the main factors for the development of body organs as well as to give form of the body. Further Sushruta has given prime importance to Rakta and has considered to be the vital ingredient for ayavya utpati and described the formation of each organ of body.

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