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## Understanding Raktadushti: Ayurvedic Insights Into Blood Impurities And Holistic Health

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**Abstract:** “*Dehashya Rudhiram Mulam*” i.e. the existence of life depends upon the quantity and quality of Rakta. Rakta is considered as a Dashavidha Pranayatana, it is produced from the Prasada Bhaga of RasaDhatu with the help of Bhutagni and RasaDhatwagni.<sup>1</sup> Its Gunas are similar to Pitta Guna like Sneha, Ushna, Tikshna, Drava etc. It is Apa and Teja Mahabhuta predominant, circulates all over the body from Hridaya through Dhamanis. Jeevana, Varna Prasadana and Mamsapusti are the Prakruta karma of Raktadhatu. In *Rakta Pradoshaja Vikara*, Rakta plays a major role for the formation of the Vyadhi Samprapti (disease pathogenesis) either due to its Swatantra (i.e. Pitta Dosha) or Paratantra prakopa. This concept also plays an important role to understand the involvement of Rakta for the manifestation of either Ashukari (immediate) or Chirakari (chronic) diseases. For management of Raktapradoshaja Vikaras, Virechana, Upavasa, Raktamokshana and Raktapittahara chikitsa had been advised. Overall the Raktadusti chikitsa can be divided into Abhayantara and Bahya chikitsa. Abhaynatara can be again sub divided into Shodhana and Shamana chikitsa where as Bahya as Sthanik and Sarvadaihika chikitsa.

**Keywords:** *Raktadushti, Raktapradoshaj vikara, Rudhira, shonita*

### Introduction-

Dosha, Dhatu and Mala are considered as three basic elements of body.<sup>2</sup> Among these, Dhatu does DharanaKarma. <sup>3</sup>They are seven in number. Rakta Dhatu is the 2<sup>nd</sup> Dhatu. According to Maharshi Sushruta “*Dehashya Rudhiram Mulam*” i.e. the existence of life depends upon the quantity and quality of Rakta<sup>4</sup>. Further it is explained that as like Tridosha are considered as Tristhuna (pillars) for the body, Rakta is also equally

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responsible for Shareera Sthiti (existence) and Laya (destruction). Acharya Charaka included Rakta under Dashavidha Pranayatana and a detailed explanation has been given in Vidhishonita Adhaya. It is produced from the Prasada Bhaga of RasaDhatu with the help of Bhutagni and RasaDhatwagni.<sup>5</sup> Its Gunas are similar

to Pitta Guna like Sneha, Ushna, Tikshna, Drava etc. It is Apa and Teja Mahabhuta predominant, circulates all over the body from Hridaya through Dhamanis. Jeevana, Varna Prasadana and Mamsapusti are the Prakruta karma of Raktadhatu.<sup>6</sup> By the characteristic features of RaktaDhatu, one can understand it, as that fluid component which circulates all over the body through heart and vessels and does nourishment of every tissue and organ of the body. So it is interpreted as blood. The red color of blood is due to the hemoglobin content of RBC's. So grossly Rakta Dhatu can be considered as the complete blood. Similarly Rasa Dhatu can be considered as the component of blood except RBC's. So there is a need to differentiate and have a clear cut understanding of RaktaDhatu from RasaDhatu which comes under the broad term blood

Utpatti of Raktadhatu been explained by all almost all Acharya as per Kedari Kulya nyaya "*RasadRaktamtatoMamsam*".<sup>7</sup> Rasa Dhatu when comes contact with Ranjaka Pitta in Yakrit (liver) and Pleeha (spleen) converts into Rakta Dhatu<sup>8</sup>. Acharya Charaka in Srota Vimana explained Raktavaha Srotas along with its dusti Karana, Lakshana and Ckititsa<sup>9</sup>. In Shonitavarnaneeya Adhayaya Maharshi Sushruta explained the Panchabhautikata of Rakta<sup>10</sup>.

Considering various pathological conditions both Acharya Charaka<sup>11</sup> and Maharshi Sushruta<sup>12</sup> explained list of *Rakta Pradoshaja Vikara*. There Rakta plays a major role for the formation of the Vyadhi Samprapti (disease pathogenesis) either due to its Swatantra (i.e. Pitta Dosha) or Paratantra prakopa. This concept also plays an important role to understand the involvement of Rakta for the manifestation of either Ashukari (immediate) or Chirakari (chronic) diseases. The diagnosis of RaktajaVikara and its Chikitsa been more clarified by Acharya Charaka in Vidhishoniteeya chapter. For Sadhya Asdhayata of many diseases Rakta plays an important role e.g. presence of Raktadhatu along with Mamsa and Shareerabala is considered as SadhyaVyadhilakshana.<sup>13</sup>

For the Chikitsa of Raktajavikara, Acharya Charaka mentioned ten drugs under Bhesaja Chatuska *Shonita Sthapana Varga*<sup>14</sup>. On a close observation to these drugs it can be identified that Acharya used few of these medicines like Madhu, Madhuka are used as internal use whereas drugs like Lohita (Kumkuma) and Mocharasa are used frequently as external Lepa and Basti form respectively. Further in Vidhishoniteeya chapter Virechana, Upavasa, Raktamokshana and Raktapittahara chikitsa had been advised.<sup>15</sup> Maharshi Sushruta being a surgical person given very detailed description about bloodletting therapy and considered Shiravyadhana as *Ardhachikitsa* (half treatment in itself)<sup>16</sup>. Overall the Raktadusti chikitsa can be divided into Abhayantara and Bahya chikitsa. Abhaynatara can be again sub divided into Shodhana and Shamana chikitsa where as Bahya as Sthanik and Sarvadaihika chikista. The present work is undertaken to understand raktadusthi with Ayurveda perspective for holistic health

**Material and method:**

The needful data were being collected from the literatures of Brihatrayees and from other available sources like published journals, articles etc. After doing careful observation to those literatures, the obtained data are been separated and arranged as per the need of study and critical analysis is assessed.

**Nirukti(origin)-** Rakta is word originated Sanskrit word from 'Raj Ranjane' meaning is to stain.<sup>17</sup> If white cloth is stained with this Dhatu (tissue) it become red coloured hence it is called as Rakta. As it is one of the seven Dhatu, (tissue) it is present in entire part of the body. However it may present in large quantity in some places and may be functioning specifically in context to some organ. Such places are known as Sthana (location) of the Raktadhatu (Blood) Raktavaha Strotas (channel) is main site of Raktadhatu (Blood). Principle organs of this Strotas are liver and spleen. <sup>18</sup>Susruta added the Raktavahi Dhamini (blood vessels) as the moolasthan of Raktavaha srotasa.

**Synonyms(paryay)-**The synonyms of RaktaDhatu are Rudhiram, Asriga, Shonitam, Asram, Lohitam.<sup>19</sup>

**Utpatti of Rakta Dhatu in the Shareera:**

Acharya Charaka explained Jala Mahabhuta and Agni Mahabhuta predominance Sharira bhava and Rakta has been included in both due to its Drava guna and Usna guna respectively. <sup>20</sup>Maharshi Sushruta explained Rakta as a Agneya guna predominant however he further explained individual Mahabhuta quality of Rakta.<sup>21</sup>

**Characteristics of Rakta Dhatu:**

The ideal state of RaktaDhatu is Asamhatam i.e. neither viscous nor liquid state. <sup>22</sup>Acharyas had also noticed different subjective and objective characteristics of rakta (blood) in healthy and diseased states. Rakta itself is a dhaatu (~structural frame work of body) and has an important role to sustain the life. <sup>23</sup> Dravataa is one of the most essential qualities of rakta (blood) which enables it to circulate all over the body and convey the information from different body structures at macro and micro level. Raaga is one of the most important, eye-catching attributes of rakta (blood). <sup>24</sup> A minute alteration from normalcy distinctly reflects through rakta (blood). These manifestations are more marked when rakta (blood) itself is vitiated.

**Table1: Characteristic variations in Dosha dushit Rakta dhatu**

Rakta dusthi	Acharya Charaka	Acharay Sushrut
Shudha rakta	<ul style="list-style-type: none"> <li>• Tapaniya (~colour of rising sun or heated gold),</li> <li>• Indragopa (~colour of special insect),</li> <li>• Padmaalakta (~colour of red lotus),</li> <li>• Gunjaaphala (~colour of Abrus precatorius L.)</li> </ul>	<ul style="list-style-type: none"> <li>• Asamhata (~compactness)</li> <li>• Avivarna (~monotonous)</li> <li>• Anushna sheeta (neither hot nor cold)</li> <li>• Snigdha (~unctuous)</li> <li>• Guru(~heavy)</li> <li>• Visra(~fishy odour)</li> <li>• Vidaaha (~burning sensation)</li> <li>• Madhura rasa(sweet taste)</li> </ul>
Vata dustha rakta	<ul style="list-style-type: none"> <li>• Arunaabha (~dusky red)</li> <li>• vishada (~clear)</li> <li>• phenila (~frothy)</li> <li>• tanu (~thin)</li> </ul>	<ul style="list-style-type: none"> <li>• Krishna (~blackish)</li> <li>• Paarusha (~roughness)</li> <li>• Sheegra gaami (~first moving)</li> <li>• Askandi (~non coagulant)</li> </ul>
Pitta dustha rakta	<ul style="list-style-type: none"> <li>• Peeta(~dark yellow)</li> <li>• Asita(~blackish colour)</li> <li>• Sthyaayatiushna (~on accounts to increased heat)</li> <li>• Acirena(~delayed coagulation)</li> </ul>	<ul style="list-style-type: none"> <li>• Neela(~bluish colour)</li> <li>• Harita (~greenish colour)</li> <li>• Shyaava(~pale colour)</li> <li>• Visra(~fishy odour)</li> <li>• Anistha pipeelik aamakshikaa (disliked by ants and flies)</li> <li>• Askandi (non-coagulant)</li> </ul>

**Table 2: Gunas of Rakta dhatu on basis of Mahabhuta**

Mahabhuta	Sartha Guna	Present in Rakta
Prithvi	Gandha	Visrata (odur)
Jala	Rasa	Dravata (fluidity)
Agni	Rupa	Raga (colour)
Vayu	Sparsa	Sapnadana(movement)
Akasha	Shabda	Laghuta (lightness)

### Justification of Rakta as a Dhatu:

Acharya Susruta describes Rakta as fourth Dosha (body humours). Dosha (body humours) are responsible for the creation of living body, fourth entity named as Rakta Dhatu (blood) also takes part in origin, sustaining and is responsible for the death.<sup>25</sup>

Arundatta had given a detailed discussion on why Rakta cannot be considered as fourth Dosha. Even though having slimily features like Dosha e.g. Mulasthana, Guna, Karma, Vruddhi, Kshaya, Dustikarana, Lakshana and Chikitsa. Still there is nothing called Raktaja Prakriti, Raktaja Jwara. As like Tridosha are having particular time of Prakopa in a day, Rakta doesn't have. Without involvement of Tridosha, Rakta cannot form the disease alone. The term Raktaja Vikara used on the basis of "Ghrita dagdha nyaya" (burning due to Usnaguna of Agni present in Ghrita, not due to Ghrita directly). Vagbhata established the Ashraya-ashrayee relation between Pitta and Rakta due to similar properties.

### Dhatu Poshana:

Dhatu Poshana is also known as Suksma Pachana when the Ahara Rasa absorbed from the Adho-Amasaya is taken to Hridaya with the help of Samana Vayu and then transported to the Dhatus with the help of Vyana Vayu. Though Charaka<sup>26</sup> and Vagbhata<sup>27</sup> while giving the description about the distribution of Rasa all over the body used the word 'Yugapat' (all at once) but according to Arundatta commentator on Ashtang Hridaya. That is 'Yugapat' means rapid distribution of Ahara Rasa. This can be better understood by Utpal Shatapatra Vedhana Nyaya. There are several theory postulated by the Tikakaras likes Ksira Dadhi Nyaya, Kedara Kulya Nyaya, Khale Kapota Nyaya .

When the Ahara Rasa is distributed in the body, first Rasa Dhatu gets nourished followed by Rakta, Mamsa, Meda, Asthi Majja and last the most essence of all Dhatus i.e. Sukra get nourishment. When the Ahara Rasa is subjected to the digestion by the Rasagni it split up into three Amsas (parts). The Sthula Amsa nourishes the Rasa Dhatu, Suksma Amsa nourishes the RaktaDhatu and residue part is Mala Kapha. The formation of Raktadhatu also depends upon the quality of Rasa dhatu Poshaka amsa. In Vidhishonitreeya chapter Vidhiyuktaahara i.e. Asta Ahara Vidhi Visheshayatana, Desha Satmya, Kala Satmya and Oka Satmya are factors responsible for the formation of Suddharakta (pure blood).<sup>28</sup> In Pandu Rogachikitsa, Charkapani the commentator of Acharya Charaka Samhita explained that due to absence of "Raktaposhaka Sara bhaga" in the Ahara normal blood formation decreases.<sup>29</sup>

According to Ayurveda, the Ahara having all six Rasas is capable of developing all Dhatus. Chakrapani identifies the quantity of different food as one Kudava of Anna, two Palas of Mamsa, one Pala of Supa etc. Since Rakta has Agneya Guna, food which is Agneya in nature must increase Rakta. Agneya Dravyas possess Ruksha (dry), Tikshna (sharp), Ushna (hot), Visada (clear), Sukshma (subtle) and chiefly consist Roopa Guna (colour/vision). When consumed it creates Daha (burning sensation), Prabha (lusture), Varna (colour), Prakasa

(bright) and helps in Pachana(digestion).<sup>30</sup>From the qualities attributed to Agneya by Acharya, we can assume that hot, coloured vegetables, redmeat, and animal blood can increase Rakta.

### Pathological conditions due to Rakta dushti:

Any pathological episode may reflect on its physical and biochemical parameters even at cellular level. Vata, pitta and kapha dosha are abundantly circulates through the blood and on this rationale the Acharyas has invented Naadi pariksha (Ayurveda method of investigation) to know the dosha (pathological variation). It is the best media which make collaboration between the external and the internal humankind. The pathological corresponding to Rakta dhatu is usually in the form of Kshaya, vrudhi, or dushti, the table shows Vrudhi Kshaya Lakshanas explained by different Acharyas.

**Table 3: Vrudhi Kshaya of Rakta Dhatu explained by different Acharya**

Lakshana (Vrudhi)	Charaka	Shushruta	Vagbhatta
Raktanga	-	+	-
Rakta akshi	-	+	-
Sirapurnata	-	+	-
Visarpa Pleeha Vidradhi	-	-	+
Kustha Vatarakta Pittarakta Gulma Upakusha Kamala	-	-	+
Vyanga	-	-	+
Agninasa	-	-	+
Moha	-	-	+
Rakta varna of Netra	-	-	+
Twak and Mutra			
<b>Kshayaya</b>			
Sphutita	+	-	-
Mlaana	+	-	-
Twak Rukshata	+	-	+
Twak Parushya	-	+	
Amla Iccha	-	+	+
Sira Sithilata	-	+	+

**Table showing Karma of Prakrit Rakta Dhatu according to different Acharya**

Symptoms	Charaka (Su. 24)	Sushruta (Su.14)	Vagbhatta (Su.36)
Strength	+	+	+
Complexion	+	+	+
Sparsha Jyana	-	+	-
Functioning of Indriya	+	-	-
Appetite and digestion	+	-	-
Nourishment	+	-	-
Dhatu Purana Karma	-	+	-
Mamsapusti	-	+	-
Ayu vrudhi	+	-	+

**Vikrit (Pathological) Rakta Karma:** It can be understood with Vruudhi (hyper), Kshaya (hypo) or Dusti (abnormalities) Lakshana. which are explained by Brihatrayee. This can be understood as Dravyata (quantity), Guna (quality) and Karma(action) at different instances as follows.

**Table 4: Vrudhi and Kshaya of Rakta based on Dravyata, Gunata and Karmata in different diseases**

Sr.No	Parameters	Name of Disease
1	Dravyatah Vrudhi	Raktapitta
2	Gunatah Vrudhi	Vatashonita (Sara and Drava)
3	Karmatah Vrudhi	Yakrit and Pleeha Udara
4	Dravyatah Kshaya	Pandu
5	Gunatah Kshaya	Varna nasa
6	Karmatah Kshaya	Ardita

**Table 5: Different causes of Rakta dusti explained in Vidhishonita Chapter by Acharya Charaka**

Sr. no	Parameters	Factors for Rakta dusti in Cha.Su 24/ 5-10
1	Aharaja	Kulatha, Masha, Harita, Jalaja and Anupamamsasevana, Virrudhaahara, Madya, Atimatra ahara sevana, Dadhisevana, Ajeerna, Adhyasana
2	Viharaja	More exposure to Agni, Suryatapasevana, Shrama.
3	Manasika	Krodha (anger).
4	Other Nidana	Chhardivegadharana, lack of shodhana, Diwaswapna after intake of drava, snigdha, guru ahara. During Sharad ritu (Naturally)

**Role of Rakta in Vikara various pathogenesis (Samprapti)**

Understanding of Vyadhi in Ayurveda is carried out based on different Samprapti. The causative factors (Sanchaya avastha) when mixed with different Dosha along with dusta Rakta (Prakopa) manifestation (Prasara and Sthana Samshrya) of different disease (Vyakta and Bheda) occurs at different stage of pathogenesis (Samprapti bheda). Few illustrations been given in the table.

**Table 6: Charaka's Classification of Samprapti w.s.r to Rakta Dusti in different conditions**

Sr.no	Name of Samprapti	Diseases / Conditions	Reference
1	Samkhya Samprapti	Raktaja Gulma in 5 Gulma bheda	Cha.Nidana 3/3
		Raktaja Atisara in 6 varieties of Atisara	Cha.chi 19/69-70
		16 variety of Raktaja eye disease by Sushruta	Su.Uttara 1/28
2	Pradhana samprapti	Vata with Rakta (Vatarakta)	Ch.chi 29/11
		Pitta with Rakta (Raktapitta)	Cha.Ni 2/4
		Kapha Pitta with Rakta (Vikara)	Ast.Hri 27/2
		Tridosha with Rakta (Kustha/Visarpa)	Cha.Ni 5/3 Cha.Chi 21/15
3	Vidhi Samprapti	Nijavaydhi (Tridosha with Rakta) e.g. gulma, kustha, Vatarakta, Visarpa	Cha.Su9/3(4) Cha.Su9/3(2) Cha.Su9/3(7) Cha.Su9/3(2)
		Agantuja- Abhightaja , Visha (Kitibha, kotha)	Cha.Ni 1/30 Cha.Chi 23/31
4	Vikalpasamprapti	Due to Drava Raktapitta,	Cha.Ni 2/4
		Drava and Kledaguna in Prameha,	Cha.Ni 4/6 Cha.Chi 6/51
		Usna gunaVisarpa.	Cha.chi 21/31



		Sara and dravaguna in Vatarakta.	Cha.Chi 29/13
		Usna, Tikshna guna in Visha.	Cha.Chi 23/24
5	<b>Bala Kala Samprapti</b>	Rtu- Sharad rtu naturally.Ahara/Vihara- as explained in Vidhishoniteeya.	Cha.Su 24/10

List of Rakta Pradoshaja Vikara been given by Acharya Charaka in Sutra Sthana. Pradoshaja word indicates that Tridosha get vitiated mixed with Rakta and produces various pathology especially Pitta. Diseases like Pramilaka, Akshiroga, Upakusha, Shiroruk, Lavanaasyata, Kampa, Raktameha etc. are listed under Pradoshaja Vikara or Swatantra Vyadhi. Raktajavikara are also known due to its Ashukarita (quick in nature) which is again due to Usna, Tikshna guna of Pitta. Diseases like Raktapitta, Visarpa, Raktaja Arsa, Vatarakta, and advance stage of Kamala, Virechana and Vasti Atiyoga, Mada, Murccha, Sanyasa, Abhigataja (external injury) are the examples.

Acharya Charaka while explaining Udararoga, for Yakritodara and Pleehodara Rakta vrudhhi is considered one among the cause<sup>31</sup>. Vidradhi(Abscess) verity of Prameha pidaka undergoes quick paka (suppuration) due to vitiated blood and causes excessive Vidaha (burning)<sup>32</sup>. In the Vishama Jwara bheda, Satata Jwara the symptoms appear twice a day and considered as Rakta dahtugata<sup>30</sup>. For Raktaja Gulma nidana Acharya Charaka explained how Paratantra Prakopa (indirect involvement) of Rakta leads to formation of Vyadhi<sup>33</sup>. The upadhatu (sub product) of Rakta are Sira and Kandara. These became a part of Samprapti in Vatavyadhi<sup>32</sup> (neurological disorder) like Ardita, Pakshaghata, Akshepaka etc.Maharshi Sushruta in the context of Sotha explained that after the passage of time (Kriyakala) involvement of Rakta will be there.<sup>34</sup> Sharangdhara explained Rakta is having Snigdha, Guru, Chala and Madhura guna in its Prakrita Avastha and became Vidagdha as like as Pitta in Vikrita (Pathological) Avastha. Futher explained ten Nanatmaja Raktajavikara as followings.<sup>35</sup>

**Table 7: Nanatmaja Vikara of Rakta explained by Sharangadhar**

Sr.No	Name of Vikara	Probable correlations
1.	Rakta Gaurava	Sluggishness of blood
2.	Rakta Mandala	Wheals formation
3.	Rakta Netra	Redness of conjunctiva
4.	Rakta Mutra	Haematuria
5.	Rakta Sthivana	Splitting of blood
6.	Rakta Pidaka Darshana	Red Papules
7.	Usnata	Warmness
8.	Puti Gandhatwa	Foul smell
9.	Peeda	Pain
10.	Paka	Suppuration

### Diagnosis of Raktaja Vikara as per classical parameters

Upashaya Aunpashaya method has been told to identify the RaktajaVikara by Acharya Charaka. In Vidhishoniteeya chapter it is explained that, diseases which are not subsiding even after doing Sheeta (cold), Usna (hot), Snigdha (oily) or Ruksha (uncotous) are to be considered under Raktajavikara. Other classical diagnosis Parameter such as Trividha Pareeksha, Shadvidha Pareeksha, Ashtavidha Pareeksha and Dashavidha Pareeksha methods have been explained by Acharyas and Maharshi which can be used for diagnosing the Raktaja Viakara. In the given table one of the parameters been used for demonstration.

**Table 8: Diagnosis of Rakataja Vikara based on Trividha Roga Pareeksha vidhi**

Sr No	Name of Pramana	Symptoms of Rakta Dusti
1	<b>Aptopadesha</b>	<ul style="list-style-type: none"> <li>● Pitta and Rakta Ashrya-Ashrayi bhava</li> <li>● Sharad Ritu Rakta Dusti</li> <li>● In Abhigata, Vata and Rakta involvement</li> <li>● Raktaja vikara as a bheda in different classification of diseases</li> </ul>
2	<b>Pratyakshya</b>	Appearance of Daha, Usna, Raga, Tamra, Pandu varna, Prabha hani, Sira saithilya, Indriya Draoubalya, Hrut Kampa, Twak Rukshata, Rakta purna Lochana, Sira snayu Kandara sosa, Mamsa Kshaya and other Raktaja dusti Vyadhi Lakshana.
3	<b>Anumana</b>	Disease which are not subsided by sheeta, Usna,Snigdha and Ruksha chikitsa are to be considered as Rakta dusti, Sishira dwesi, Amla Iccha, exposed to Atapa, Anila, Usna, tikshna Dravya, Intake of Madhura dravya by Sukumara Purusha, Chinta,soka, bhaya other hetu explained in Rakta dusti context.

### Principle and management of Raktaja Vikara:

Shadupakrama (six fold of treatment)<sup>36</sup> been explained by Acharya Charaka in Yojana Chatuska to treat Tridosha Vikara. They pacify the vitiated Dosha till Prasara Avastha (third Kriyakala). So it can be understood that when the vitiated Dosha become Rakta dhatu gata i.e.(fourth kriyakala) disease will be present all over the body, not therefore not responding to Dosha Veepareeta chikitsa (Shadupakrama chikitsa). If Rogi is Balavan (physical strength) then Raktamokshana (bloodletting) need to be carried out. Overall the Raktaja vikara chikitsa explained by Acharya can be divided in to two, Abhayantar (internal) and Bahya (External).

**Table 9: Relation of Tridosha and Shad Upakrama Chikitsa**

<b>Dosha Chikitsa</b>	<b>Guna based Assessment</b>
<b>Vata chikitsa</b>	Snigdha +Usna chikitsa
<b>Pitta chikitsa</b>	Snidha+Sheeta chikitsa
<b>Kaphachikitsa</b>	Usna+Ruksha chikitsa

**Abhyantra chikitsa**

**Shodhana** (bio-purification) – Mrudu Vmana, Virechana, Basti and Nasya (Cha.si) are to be done.

**Samana** (conservative) - Upavasa, Raktapittahara medicine, Raktaprasadna and Samgahi medicine are to be used.

In the paschat karma, Acharya Charaka and Maharshi Sushruta specially advised to take care of Agni after doing Raktamokshana karma. Maharshi Sushruta advised if a little amount of Dosha left in the Rakta, then it's not going to harm the disease.<sup>37</sup> In the Sannipata Jwarachikitsa, when it became associate with Asadhyaalakshan (sotha at karnamula) Raktavasechna been indicated.<sup>38</sup>

**Bahyachikitsa**

**Sthanik** (localised) - Different lepa, Jaluka, Sringa, Alabu, Pariseka are to be done.

**Sarvadaihik**(generalised)- Raktamokshana needs to be done. Maharshi Sushruta explained different Sira Vyadha places in different conditions.

**Discussion:**

Suddha Arthava (Upadhatu of Rakta) and Suddha Rakta plays an important role for the formation of Garbha. In a review article “A physiological Study on Rakta Dhatu” reviles that Rakta Dhatu brings Prana to every Dhatu. The air inhaled during the process of inspiration becomes vital Prana for human body. This Prana by means of Rakta Dhatu is supplied to every organ, tissue and cell to perform their respective physiological activities. Further states that based on modern physiology it can be illustrated that Prithvi Mahabhuta include serum protein, hemoglobin, glucose etc, Jala Mahabhuta include plasma, lipids etc, Agni Mahabhuta include potassium, magnesium, iodine, chloride, acid phosphate, lipase, insulin etc, and Vayu Mahabhuta includes oxygen, carbon dioxide, vitamin C and thyroxin<sup>39</sup>. In the process of different internal organ formation explained by Sushuruta in Garbhavyakarana chapter Rakta plays a major role e.g. lungs are formed out of Phena of Rakta , Vrikka (Kidney) is formed out of Rakta and Meda, Jihwa (tongue) is formed out of Kapha, Rakta, Mamsa. According to Acharya Kashyap, Rakta has a major role in Danta utpatti (dentition process). Further in Samhita different Rakta pradoshaja diseases are collectively mentioned under one heading for single treatment principle approach. Whereas they can be further classified based on Hetu (Dravya, Guna Karma), and different Samprapti

types. This can be understood through following examples. Diseases like Pandu, Raktapitta, Vatarakta and Kustha etc Rakta plays an important role for the formation of disease. In Pandu Usna guna of Rakta leads to reduction of normal blood formation, in Raktapitta Usna and Drava guna leads to Attipravriti of Rakta, in Vatarakta Sara and Drava guna of Rakta leads to sthana samshraya at smaller joints and creates severe Pain, in Kustha Kleda, Usna and Tikshna Guna of Rakta results reddish discoloration, raised local temperature, itching etc. Though Virechana, Upavasa and Rakta mokshana are said to be the general treatment protocol for Rakta dusti still disease specific treatment been explained for individual disease. The three fold of treatment principle Shodhana, Shamana and Swastha hita dravya is widely used to treat these conditions i.e. Madhura, Tikta rasa medicines can be used either in form Shamana or Shodhana either alone or in combination for Sheeta guna and sheeta virya or Amapachana purpose respectively. Whereas Kashaya rarsa Dravya are used exclusively as Samana intension to remove Kleda guna of Rakta. Examples are Sariva ( Madhura , Sheeta) for Shamana., Draksha (Madhura, Sheeta) for Mrudu Virechana. Chandana (Tikta, sheeta) for Shamana, Katuki (Tikta) for Virechana.

### **Conclusion:**

The synonyms of Rakta are explained as Rudhira, Lohita, Asrig, Shonita at different intervals. Further its Pramana (quantity) also explained as Asta Anjali<sup>40</sup> The formation of Rakta Dhatu depends upon Hita ahara, desha, kala and quality of Rasa Dhatu as well. The importance of Rakta is as equal as Tridosha for maintenance of the body. It is considered as one among the Pranayatana(vital spot).Rakta circulates throughout the body with the help of Vyanavata with the help of Rakta dahara Kala. The normal physiological function of the Rakta is colour complexion, Mamsapusti and Jeevana (existence of life). Vikrit Dosha mixed with Rakta results into Raktapradoshaja Vikara. The diseases which are not subsiding by Shadupakrama Chikitsa are to be considered under Raktaja vikara. Raktapitta chikitsa, Virechana, Upavasa and Raktamokshana are the line of treatment for that. It justifies that Dosha are responsible for diseases not alone Rakta or any other Dhatu. These Dhatus are became shelter and guides us in understanding Srotas as well as Uttana (early stage)) and Gambheerata (chronicity) of diseases.

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