

BLOOD: WHEN ACTS AS A SHALYA (FOREIGN BODY)***Dr. Maheshkumar Nilkanth Chaudhari**

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ABSTRACT

Purpose: Chief purpose of this research article is to illustrate the action of blood as a Shalya (Internal foreign body) & make cautious to all medicos as well as entire human kind regarding, the importance of non-vitiated normal blood. observing many patient of cerebral strokes, heart attacks, & deep vein thrombosis (DVT) in my day to day practice since 20 years. These diseases are the self originated by body due to the vitiated blood. After diagnosing the case, most of the doctors following the necessary treatment according to the patient's physical status. But no body thinks about, what would be the exact causative pathogenesis behind this condition? Cause is known but, Should we avoid this condition ? Yes, only with the view of Ayurveda. Everybody have same anatomy, physiology but only some peoples can suffered by this diseases. This thought makes me restless. So I think more & search made to find out the literature in modern as well as in Ayurveda. This literature we learned in our U.G., P.G. level but never try to collaborate each other. Ayurved principles & modern science, if think together, a wise person easily understand all this pathology behind it. Only this thing inspired me to write this research article & mentioned all those things by both modern & Ayurveda way to prove that even if blood is essential for life but it could also be the cause of death too.

KEYWORDS: Blood (Rakta dhatu), Dash-Pranayatan, Shalya, Cardio-vascular system & Ayurveda.

Surprized! Yes, blood can also acts as a Shalya (Internal foreign body). May be when extraavasated (Outside the circulatory system in the body) or may be when in the circulatory system (i.e. Sharirik- Shalya). As we know, how the blood is important for a life. That is a essential part for our liveness, it becomes fatal for life in many conditions. According to Ayurveda, main function of blood is "Jivan", which holds the PRANA in our body. That's why Maharishi illustrated bloods as a Prana & includes in Dash-Pranayatan.

First we comprehend about the word, 'Shalya', then the normal function of Rakta-Dhatu (Blood).

‘शल’, ‘शल’ आशुगमने धातुः। तस्य शल्यमिती रूपं।

तद द्विविधं- शारीरमागन्तुकश्च ॥

सु.सू. 26/3

‘Shal’ & ‘shawl’, these two Dhatu are made the meaning of ‘Ashugaman’ – means - *an emergency intervention*. There are two types of Shalya – 1) Internal (Physical) & 2) External (Foreign body).

सर्वशरीरबाधकरं शल्यं, तदीहोपदिश्यत इत्यतः शल्यशास्त्रम् ॥

सु.सू. 26/4

That element, which creates an obstruction in systemic normal function or pain in the body, that is called as, 'Shalya' & where illustrated the techniques to remove these Shalyas, that science is called as, "Shalya-Shashtra".

तत्र शारीरं रोमनखादी धातवोऽन्नमला दोषाश्च दुष्टाः।

आगवन्तपि शारीरशल्यव्यतिरेकेण यावन्तो भावा

दुःखमुत्पाद्यन्ति ॥

सु.सू. 26/5

Internal (Physical) & External (Foreign body) are two types of Shalya, which includes Dant (dental), Rom (hair), Nakh (nail), Shmashru (hair of beard & moustache), *Rasa-Raktadi dhatu*, Anna (food), Mal (waste product of the body) & vitiated Vatadi Dosha, these are Internal (Physical) shalyas & except these internal shalyas, rest of all those things which creates a pain or obstructs the normal function of the body or strotasa, they all are Agantuk (External) shalyas.

Dasha- Pranayatan – 10 abodes of life -

दशैवायतनान्याहुः प्राणा येषु प्रतिष्ठिताः।

शंखौ मर्मत्रयं कण्ठो रक्तं शुक्राजसी गुदम् ॥

च.सू.29/3

तानीन्द्रियाणी विज्ञानं चेतनाहेतुमामयान् |

जानीते यः स वै विद्वान् प्राणाभिसार उच्यते ||

च.सू.29/4

In the body, Prana-vital life force resides in 10 places – Shankhau-2 Shankh places i.e. both Temporal region, Marm Traya – Three marmas – Heart, Urinary system & Brain, Kanth- Throat,

Rakta- Blood,

Shukra- Reproductive system,

Ojas- Immune system &

Guda- Rectum.

The wise physician who is well acquainted with these 10 important abodes of life and knowledge about sense organs, intelligence, soul (Spirit), cause of disease, treatment & signs and symptoms of disease is known as 'the savior of life' or 'Pranabhisar Vaidya'.

शोणितवहानां स्रोतसां यकृन्मुलं प्लीहा च |

च.वि.5/10

रक्तवाहे द्वाे | तयोर्मुलं यकृत् प्लीहानौ रक्तवाहिन्यश्च

धमन्यः||

सु.सू.9/12

Rakta-Dhatu is circulating all over the body with Rasa-dhatu. It's main origin are in Liver & Spleen with entire arterial & venous system, added by Sushruta.

देहस्य रुधिरं मुलं , रुधिरेनैव धार्यते |

तस्माद् यत्नेन संरक्ष्य रक्तं जीव इति स्थितीः||

सु.सू.14/44

Blood is the basic requirement for life & holds Prana, circulates in arterial & venous system with the help of Vyan Vayu . That's why one should always protect it for all the time to save the life. After the blood formation in Liver & Spleen, divided in 3 parts -1) Macro part, 2) Micro part & 3) Waste part. Macro part means – RBCs, WBCs, Platelets, etc. Micro parts means- Nutrients part from which next dhatu will nourish or form & Waste part of blood means- Fine Kleda (i.e. Shonit Kitta), in modern medical science, we can say, ' LDL Cholesterol'. If this waste part, i.e. fine-Kleda, not excreted from the body & deposited in arterial or venous system can cause for Atherosclerosis.

Macro mal means Pitta dosha & micro mal means kleda. Actually both are mal, but macro mal – i.e. Pitta dosha is important (i.e. Raktagni, which essential for forming or nourishing to next dhatu –Maans.).

According to modern medical science, there are 2 types of Cholesterol- 1) HDL Cholesterol- which is beneficial for body (i.e. good cholesterol) & 2) LDL Cholesterol- which is harmful for our body particularly for circulatory system. So we can classified that HDL –may be Pitta dosha & LDL –may be Kleda.

असंहतम् नात्यच्छं नातिघनं, न स्त्यायति |

अविवर्णमिति इंद्रगोपाकवर्णमपी ईषद् विविधवर्णम् ||

सु.सू.14/7

When blood circulates all over the body, it doesn't suppose to stick to any dhatu. If blood coagulates or sticks any where in the body, then there must be a serious problem. Because if blood coagulates, then stop it's 'Jivan' function, on the contrary Prana & Jivan are the functions of Ras-Rakta dhatu. But normally it must be coagulates in any kind of cutting injury & surgery. If drained in massive quantity then *Dhatunash* occurs, so coagulation process is important. You can inherit a propensity towards sticky blood or you may have a condition that makes you more prone to thrombosis like lupus, rheumatoid arthritis, certain cancers and vascular disease. People who have had surgery may also be at risk of blood clots. It is possible to treat the tendency to produce blood clots.

Blood coagulation system

स्कंदनं शोणितस्य स्त्यानीभवनं, स्त्यायति घनं भवति |

इल्हण

Coagulation is the property of blood (particularly of Platelets), when it extravasated from the system. There are two important factors – 1) Bleeding time & 2) Clotting time. Normal bleeding time is 2-2.5 min. & normal clotting time is 3-8 min.

These factors are very important to rule out prior to any surgery because BT,CT count are raised then definitely there will be chances of massive blood loss during & after surgery & this would be fatal . If these factors ruled out prior to surgery & found de-ranged, then we will have time for treatment.

Symptoms of a blood clot

The symptoms of a blood clot depend on its location in the body.

In the brain the first symptom may be a stroke or a transient ischemic attack. The symptoms of these vary in degrees but include loss of vision in one field, facial weakness, speech impairment, difficulty understanding others, headache, loss of co-ordination . In or around the heart, a blood clot causes a heart attack, the symptoms of which are severe chest pain that radiates into the left arm and shortness of breath. However, women may have more diffuse symptoms. Another example – Coronary blockage. This is also due to blood problem & Shonit

Kled (i.e Atherosclerosis). For this, treatment like thrombolysis & coronary angioplasty are the choice of treatment. There are many more examples like Atherosclerosis, Thrombo angitis Obliterance, Aneurysm, Phlebitis, Varicose veins. This type of patients, we always come across in day to day practice.

In the lung, a blood clot causes chest pain, elevated heart rate, blood on coughing, shortness of breath and low-grade fever. In a limb, a blood clot will cause pain, swelling and discoloration of the affected area. If the clot is in a vein, swelling and tenderness will occur & form DVT. Not only blood will act as a shalya, when it is extravasated, but also when in the vein. For example- Deep Vein Thrombosis is the best example of venous blood clot (Thrombosis). The reason behind this pathology is many like, incontinence of valve of vein, raised platelet count, continuous straight posture, etc.

Predisposing conditions for thrombosis-

Damage to the blood vessels: If the inner walls of a blood vessel (endothelium) are damaged, it makes it easier for blood clots to form. Damage to the endothelium exposes the underlying collagen in the blood vessel and this can promote clot formation.

Atherosclerosis is a common form of endothelial damage that can lead to thrombosis. Other kinds of endothelial damage can arise from physical injury, inflammation, hypertension, infection, radiation and smoking.

Turbulent blood flow causes endothelial injury. Turbulent blood flow occurs when blood vessels are affected by atherosclerosis, abnormal arterial dilations (aneurysms), and heart attack or heart valve damage.

Functions of blood – (According to Ayurveda)

जीवनं श्रेष्ठकर्म रक्तस्य |

वा.सू.11/4

Holding of Prana is the chief function of Rakta dhatu due to massive blood loss by any reason (Surgery, RTA, etc), there may be sudden death.

रक्तं वर्णप्रसादं मांसपुष्टी जीवयति च |

सु.सू.15/1

To maintain the glow & fairness of skin (Varna-Prasadan) is also the function of blood.)

तद्विशुद्धं हि रुधिरं बलवर्णं सुखायुषा |

युनक्ति प्राणिनां प्राणः शोणितं ह्यनुवर्तते ||

च.सू. 24/4

Doubtless normal touching sensation is also the important function of blood, this function performs by

skin but blood plays important role for touching sensation.

प्राणः शोणितं अनुवर्तते |

च.सू. 24/4

अनुवर्तते इति..... शोणितं अन्वयं व्यतिरेकं अनुविधीयते |

चक्रपाणि

Taking of food, water & air from the surroundings are the function of Pran-Gati. If there is an obstruction in pranvah strotasas, if there is a low level of haemoglobin, then it affects the respiratory rate spontaneously. Even in RTA or in any surgery, if there is massive blood loss then instant respiration rate is increased (Tachypnoea). Respiratory rate, quantity of haemoglobin & circulation of blood, if thinks simultaneously, it indicates that, Pran is circulates with blood in all over the body.

सुरेन्द्रगोप प्रतिमंप्रभूतं रक्तं स्रवेद्वै क्षततश्च वायुः |

करोति रोगान् विविधान् यथोक्तांश्छीन्नासु भिन्नास्वथवा सिरायु ||

सु.सू. 25/36

Regarding cerebral stroke, Sushruta quoted above version - If artery or veins cuts, then blood will come out from wound & get vitiated by Vata & creates Shiro-Rog.

Stroke and blood clots

Ischemic strokes happen when a blood clot (thrombus) or a fatty deposit blocks an artery supplying blood to the brain. Around 80% of all strokes are ischemic in origin. The remaining 20% of strokes are hemorrhagic, where an artery bursts. These can be caused by an aneurysm, a bulge or weakness in the wall of a blood vessel due to Rakta-dhatu dushti or head injury by trauma.

All of us have clotting factors in our blood to ensure we do not bleed to death if we cut ourselves. But conditions like hypertension, atherosclerosis and some other blood problems can lead to the development of blood clots. Thrombosis is the name given to the formation of blood clots. When the clot blocks the blood flow to the heart or the brain, a heart attack or stroke can follow. An embolism occurs when a blood clot travels around the body and lodges in an organ.

वातादयः प्रकुप्यन्ति शिरसि अस्त्रं च दुष्यति |

ततः शिरसि जायन्ते रोगाः विविधा लक्षणाः ||

च.सू.17/11

Due to vitiation of Vata di dosha in the arterial & venous system of brain, blood also gets vitiated & creates multiple diseases in the brain. Cerebral stroke is one of them.

Samprapti (Pathogenesis) of Cerebral Stroke

Due to above pathogenesis & due to coating of Shonit Kleda (i.e. LDL cholesterol) in the inner layer (i.e. endothelial) of artery, there is arises a obstruction in the blood flow. Arterial lumen becomes permanently narrow & loss it's elasticity. Due to this stiffness, blood pressure will raised & function of kidney, heart & brain is hampered. Due to this, patient get ischaemic infarct & angina pain in heart. Arterial wall bursts & blood flow extravasated i.e. cerebral stroke & this extravasated blood becomes in to clot & due to this clot, patient goes into coma, paralised, etc. complications arises. In the brain, this blood clot acts as a foreign body (Shalya) & compresses the brain & finally results to midline shifting of brain. The symptoms of a blood clot depend on its location in the body.

In the brain the first symptom may be a stroke or a transient ischemic attack. The symptoms of these vary in degrees but include loss of vision in one field, facial weakness, speech impairment, difficulty understanding others, headache, loss of co-ordination. Not only blood will acts as a shalya, when it is extravasated but also when in the vein. For example- Deep Vein Thrombosis is the best example of in venous blood clot (Thrombosis). The reason behind this pathology is many like, incontinence of valve of vein, raised platelet count, etc.

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So, to avoid all this, one should not be get vitiated his normal Rakta-dhatu (blood) & always try to keep blood pure. But in subcontinent like India, the wheather/ climate is so unreliable / changeable. In the Sharad rutu, the blood is naturally get vitiated, so everybody should donate the blood in Sharad rutu. This is beneficial method for purifying the blood naturally (Rakta-Mokshan).^[5]

Lifestyle factors promoting blood clots

Smoking, being more than 10 kg overweight, physical inactivity, using the contraceptive pill, using estrogen as found in some hormone replacement therapies, and immobility, can all lead to the formation of blood clots.

Some ways to prevent blood clots include: keeping physically active, maintaining a normal weight and not smoking. It is also important to manage any known heart diseases. Some people will need to take anti-clotting medication daily or after surgery, like aspirin.

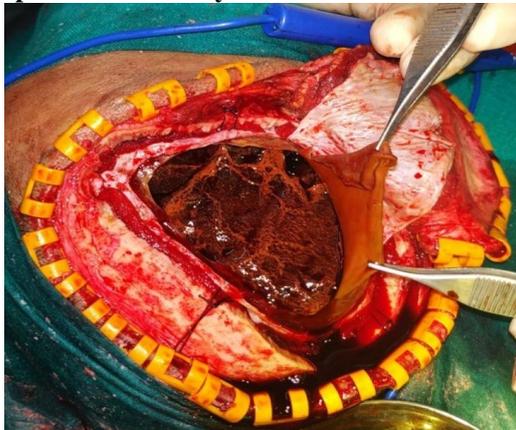
Treatment and management

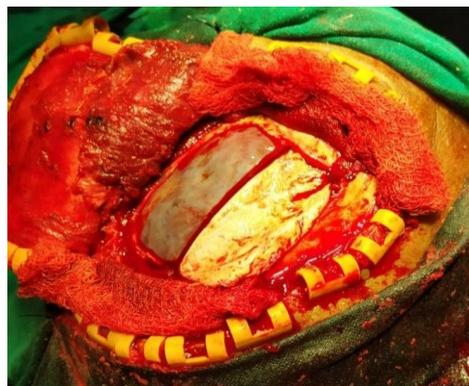
If you are diagnosed as having a thrombus or are at risk of developing a blood clot the treatment will depend on where any clot is, its size and your health.

If your diagnosis results from a heart attack or stroke, any treatment you receive will be initially to dissolve any blood clot. After that, therapies to prevent you developing clots will be used.

If your blood clot is in a vein, there is a risk it can travel to one of your organs and cause an embolism, which can be fatal. Treatment is a combination of heat, painkilling medications, anti-clotting medication and elevation/bandaging of the affected area to reduce swelling. Occasionally, surgery may be required to remove the clot.

Photographs of Craniotomy for Cerebral Strokes & RTA (SDH & EDH)





DISCUSSION

As blood (Rakta-dhatu) is among one of the sapta (seven) dhatus & also included in Dash-Pranayatan, eventhough it can acts as a Shalya (internal foreign body) when it gets vitiated . This kind of fine thought not seen in modern medical science. So here once again prove that Ayurveda is not only a medicianal science but also life science. Ayurveda thinks every matter by all directions & finely. These type of innumerable thoughts are described in Ayurveda by various Maharishis 3000 years back. Modern researchers & scientists are vaguely saying that Ayurveda needs research but same time they don't elaborate, what kind of research is to be done or expected? or needed? The fundamental principles of Ayurveda are eternal, they don't need to research but need to adopt, think & work accordingly. At the same time, I also agree with research point in Ayurveda but only in medicinal field not in literature. Research in Ayurvedic medicine / pharmacy is definitely need of the time like to increase potency of drug, to increase the expiry period Authentification of drugs, to increase the shelf life of drug . Research should done to develop the fast acting drug / emergency drug in Ayurveda.

CONCLUSION

Rakta-dhatu (blood) is work normally, when it is in normal status but when it get vitiated by Vatadi dosha or extravasated by any reason, then it acts as Shalya (internal foreign body) in the body . So one should always try to keep him healthy as mentioned in Ayurveda.

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