**ABSTRACT**

Sushruta known as father of surgery has described various surgical process along with parasurgical measures. Raktamokshan, Kshar karma, Agni karma is amongst of these parasurgical procedures. These procedures have been given special place in surgery by Shushruta and it is belived that the disease that cannot be cured by any medicine or in subjects where surgery is not possible these procedures are very much effective. In present modern era it is used as alkali burn and bloodletting [Vistravan or Vedhan] etc. Raktamokshan and Kshar karma is very effective ancient method of Panchakarma so it is need to spread awareness about Raktamokshan, Kshar karma and its efficacy. Thus Raktamokshan and Kshar karma is alternative Theryapy promising more effective and safer outcomes for the society. This article deals with various aspects of parasurgical process and its use in present context.

**INTRODUCTION**

Eye is the most the most essential sense organ of our body so that modern science as well as our ancient science give the great importance to eye related disorders in the curative and preventive manner. Acharya Sushruta is the first person in Indian system of medicine described various surgical and para-surgical procedures and its application in different diseases. These para-surgical process includes Bhesha karma [Medicanal use], Kshar karma [Chemical cauterizer], Agni karma [Heat cauterization] and Raktam okshan [Bloodletting] etc. These procedures are specifically indicted according to stage and dosh drushiti predominance. Use of different para-surgical procedures has been mentioned in context of so may diseases in Shalyatantra like Arsha, Arbuda, Bhanga, Arka, Vandana, and Shila etc. Similarly Sushruta has also mentioned these surgical procedures in Shalakya Tantra Netra roga chikitsa like Paksham akopa, Puyalaasa, Abhisayanda and Adhimannata etc. The purpose of this review article is to evaluate and discuss the various basic concept of para-surgical procedures used in Netra roga Chikitsa. Now a day Bieeldletting procedures remove impure blood and increase immunity against infective organism. Hence use of para-surgical process in described in Ayurveda much earlier than its utility was discovered by modern surgeons. The technique and equipment have become advance but the basic principle are still same.

All the references of para-surgical process are collected and complied from Sushruta Samhita and other Ayurvedic Scriptures, research papers and Journals of Ayurveda.

Acharyas Sushruta described yantra in Sutra sathana along with upyastra and Anushatra. Kshar and Raktamokshan by jaluksa are described under Upanycra as well as Anushatra.1,5

Lord Dhanvantari with leech in his hand indicates the importance of Raktamokshan Karma in Ayurveda. It was practiced prophylactically as well as therapy tically. Raktamokshan is the procedure of Panchakarma which helps to eliminate vitiated Dosha that accumulate in the body specifically Rakta and Pitta dosha. Raktamokshan mainly divided into two types Shastravistravan and Anushastravistravan but related to Netragat vyadhi we can practically use the Siravedha and Jalakavcharana. Acharya Sushruta explained Siravedha as a prime treatment in most of Vedhya Vyadhi. It is a para-surgical method which is known as Bloodletting therapy or Veneesection or therapeutic phlebotomy.

**AIM:**

A study of Raktamokshan and Kshar karma is parasurgical process in Netra roga according to Ayurveda.

**MATERIAL AND METHODS:**

The literature described in Sushruta Samhita and data collected from some personal experiences, regarding Raktamo ksahan therapy. Acharya mentioned Raktamokshan one of the important treatment of different types of Urdhvajatrugata Vyadhi.

**RAKTMOKSHAN IS OF TWO TYPES AS BELOW**

a) SHASTRAVISTRAVAN-Raktamokshandone with the help of surgical instrument.

1. Prachana-Bloodletting through local multiple incision. It can be applicable in diseases which are having drushhti of two or three Dosha over the area of one angula.

2. Siravedha-Venous puncture. It can be applicable in diseases which are having drushhti of tri Dosha and Rakta Dosha. It can be done on entire body.

b) ANUSHASTRAVISTRAVAN-Raktamokshan done without the use of metallic instruments.

1. Jala ukvcharana-Application of Leech. It can be applicable in diseases which are having drushhti of pitta dosha over the area of one Hast(a palm).

2. Shrug-Sucking through coes horn. It can be applicable in diseases which are having Drushhti of Vata Dosha over an area of ten anguli.

3. Alabu-Vacuum extraction using vegetable called Alabu. It can be applicable in diseases which are having Drushhti of Kapha Dosha over an area of twelve anguli.

According to Ayurveda total 700 Sira are present in body out of which 164 are present in Shirogriva. out of which 34 Sira present at Netra(8 Vatavaha+8 Raktavaha+8 Kaphavaha+10 Pittvah).

According to Ayurveda Sira nourishes the body and as per the modern science body is nourished by blood vessels and lymphnodes.

**INDICATIONS OF PARA-SURGICAL PROCEDURES:**

- : The condition is contra indicated for surgery.

- : The surgical instruments is not available.
The treatment is possible without surgical instrument.

KSHAR KARMA:
The Kshar karma is impotent among all the parasurgical procedures, due to its advantage of destroying Tridosha disorders by excision and scraping action. It is effective in eye lid diseases like Lagana, Araho Vartma, Shushaka Arhas, Vartmarbuda, Pakshmakopa, and Upapakshama mala.

DIFFERENT KHCRA IS USED IN DIFFERENT DISEASE-
Lagana (cyst)-Yavakshar,Tutha,Gorochana,Pippali with Honey.
Aroha Vartma, Shuskarasha, (Trachoma)- Eranda Bijja Majaa or vibhitaki Khara with Honey.

KSHAR KARMA IN NETRA ROG:
The Shodhana, Ropana, Shoshana, & Lekhana properties of Kshar karma offer beneficial effects in diseases related to eye. It helps in elimination or expulsion of harmful substance from the wound around eye area. The Shodhana property of Kshar also helps in removal of sloughs and pus. Antiseptic action of Kshar due to Ropana property helps in wound healing.

RAKTAMOKSHAN:
Raktamokshan is an important therapeutic procedure in shalaya tantra. It prevents skin diseases, swollen glands, general swelling and diseases of the blood, if done at regular intervals. Sira Vyadha and Jalokavcharan are useful in eye diseases.

BEST TIME FOR RAKTAMOKSHAN:
1. Cloudless day in rainy season
2. Cool day in summer
3. Noon in winter

INDICATIONS:
Following eye disease are treated with Raktamokshan-
1. Puyalasa (Acute Dacrocystitis)
2. Complicated condition of Arma (Pterygium)
3. Savarna Shukla (Corneal ulcer)
4. Pittaj Timir (painless loss of vision e.g. macular edema)
5. Abhishanda of all type (Conjunctivitis)
6. Adhimantha of all type (painful condition of eyes like congestive glaucoma, uveitis)
7. Visarpa (Herpes zoster)
8. Daha (Burning sensation)

CONTRAINDICATIONS:
1. Very young, old, emaciated, exhausted
2. Suffering from high fever, convulsion or unconscious patients
3. General swelling in whole body
4. Wasting due to unhealthy diet
5. Anemia
6. Piles
7. Pregnant woman

SITE WITH JUSTIFICATION:
1. Upasaaka-near nose
2. Lalita-vein of forehead vein
3. Apana-veins present at outer canthus of eye

PROCEDURE OF SIRAVEDHA:
It is divided in to main three parts
1. Purvakarma-Prakupita Dosha Viprita Dravabahul Anna or Yavagu pan.
2. Sthanik and Sarvadhehir Snehan and Swedana.
3. Ask patient lie or sit in comfortable position.
4. Tie the Bandha with the help of Vastrapatta, Charma, Antavalkal or Lata.
5. The Bandha should not too tight or too loose.
6. Pradhankarma-After desired Sira is seen properly then puncture the Sira with the help of sterile 18G needle or scalp.
7. Blood is collected in a kidney tray. When the sufficient quantity of blood is drawn (Uttam matra-1 prastha (0.78ml), Madhyam matra-25 tole, Hine matra-12 tole),
8. Then needle is withdrawn cotton swab pressed over the wound and Bandha should be released.

3. Pashyat karma- If the bleeding continous from punctured site then the fine powder of Lodhara, Yashimadhu, Raktak handan etc are applied.
   a. The area is covered with wet cloth or a thin paste of cooling Dravyas like chandana.
   b. Patient is asked to relax and rest for 10 min. Then patient advised to take light diet or milk later.

NETRAGATVEDHAVYADHI:
1. In Puyalasa-Siromokshana should be done followed by Upnaha and other measures for Akshipaka.
2. In Savarna Sukla-First Sarpipana than later Siromokshana is done, followed by Jaloukavcharana, if remnants are not cleared.
3. In Pittaj Timir-After Sarpipana, Sira Vyadhan is done.
4. In Kapjaj Timir-After Sarpipana, Sira Vyadhan is done.
5. In Vataj Abhisheyanda-Sira mokshan is done when pain is not subsided.
6. In Pittaj & Kapjaj Abhisheyanda-Repeated Shiravydha is done, Jaloakavcharan is also useful.
7. In chronic diseases for eye (pilla rog)-Shiravedhya and Virechan is done for complete recovery.
8. In Pothaki-Jaloakavcharan is recommended.

PROBABLE MODE OF ACTION OF KHARA KARMA:
The Kshar has Shodhana, Ropana, Shosshana, & Lekhana properties. Shodhana property helps in elimination or expulsion of unwanted and harmful substance from the wound. It helps in desquamation of sloughs (debridment) & draining of pus. Ropana property helps in healing of wound due to anti-septic action of Kshar. Shosshana property helps in drying up and absorption of mucus discharge that gets collected in ulcer bed promoting the granulation. Shambhan property of Kshar helps contraction of opposing edges of ulcer to promote healing and Vidyana property cause liquefication and dissolving of localized unhealthy tissue. Hence by all these properties of Kshar, healing property becomes faster.

PROBABAL MODE OF ACTION OF RAKTAMOKSHAN KARMA:
Raktamokshan removes vitiated Doshas which cause the aliment. This modality falls under purificatory therapies, which cleanse the body & helps in maintenance of health.

CONCLUSION:
It is easy to learn & apply the para-surgical procedures in the management of different surgical conditions where surgery is not possible to treat the condition or there is great chance of recurrence of disease. These process provides lot of options for the surgeon as it is easy to perform, less chance of recurrence, controlled bleeding, no need of suture, less post-operative hemorrhage & minimal pain.

DISCUSSION:
Raktamokshan is an effective blood purification therapy in which carefully controlled small quantity of blood is removed due to this vitiated pitta dosha get neutralized and decreased the Raktadushti. Kshar karma is effective in eye lid diseases & Tridosha disorder. It is beneficial effects in eye lid diseases such as Lagna, Arsha, Vartma, Sushaka, Arhas, and pakshm akopa. So the Raktamoksha & Kshar karma with proper knowledge should be another ideal treatment option in practical manner which should be more studied and applied to clinical practice for the safer outcomes to the society.
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