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Research Article

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IMPROVISE SHRINGAYANTRA FOR RAKTAMOKSHANA: A NEW TECHNIQUE

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ABSTRACT
Raktamokshana (Blood letting), a popular Para surgical procedure in Ayurvedic system of medicine is time tested. It answers several chronic problems of ill health. Among forms of bloodletting, Shringa method was getting extinct, to popularize this form, two instruments were prepared. These instruments are modified in such a way where instead of suction by mouth, mechanical suction pumps are used. These suction pumps facilitate easy, smooth suction of blood. The specifications of both instruments are kept same, the change between two being the Shringa and optic fibre. The Optic fibre Instrument was found more advantageous than the Modified Shringa Instrument. The instruments can be easily assembled and detached. The Optic fibre tube can be sterilized. These instruments are best acceptable form for all Ayurvedic physicians, which can be practiced at OPD level also. The instruments are being used for a clinical study on Vicharchika with encouraging results.
Keywords: Raktamokshana (Blood letting), Shringavacharana (Horn Application), Alter form of Instrumentation

INTRODUCTION

Blood letting is an effective and safe remedy for Shonitashraya Vyadhi (Blood born diseases).[1] Sushruta Samhita emphasized details practical guidelines for blood letting which alone itself considered as half treatment[2] (Ardha chikitsa). Various methods are employed for blood letting, namely use of Shringa (Horn application), Jalouka (Leech), Alabu(Gourd), Prachhana (Scarification) and Siravyadha (Vein puncture).[3] The bloodletting therapy is very well advocated for diverse kind of illness in all Ayurvedic texts and also indicated for healthy persons to maintain their healthy status.

In Ayurveda, the Raktamokshana methods are being placed as Para surgical treatments. It is used as prime choice of treatment widely. Among various modalities of Raktamokshana, Jalaukavacharana (Leech Therapy) and Siravyadha (Venepuncture) are more in practice due to its simplicity & ease of access. Shringavacharana, a method of Raktamokshana which is becoming extinct nowadays as it is unpopular as per era, its criticalness and lack of standardize accessible procedure. In rural area, this method of bloodletting is still practiced for several disorders, one prime condition being the snake bite, where in letting of blood in sting bitten area is first aid treatment, which aid to save the life of a person. As per classical texts of Ayurveda, Shringa is used in various Vata predominant disorders[4] like Vicharchika (Eczema), Kitibh (Psoriasis) Visarpa (Herpes), Vranashopha (Inflammatory conditions) etc. The easy and suitable materialized method of Shringavacharana is need of the hour to make it widely acceptable.

According to classics, in Shringavacharana method, after scratching the site, blood letting should be done by means of the cow horn to which a piece of thin urinary bladder (of an animal) has been tied as a cover by a thread, till blood is sucked out by manual mouth suction.[5] Specifications of it are stated in Table – 01[6,7]. Nowadays above described procedure is not acceptable by physician community due to its unappealing form. To correct this problem, modification in the classical method of Raktamokshana was needed in order to gain its lost glory. In the present study the modification was made giving due respect to the Sushruta's principles without altering much in procedure. It was thought modify the instrument in such a way that, the instrument can be easily operable at out patient departmental level also.

Aim & Objective

a. To standardize Shringa instrument.
b. To find an alternative instrument to Shringa

Need for modification

Sushruta explained method of Shringavacharana by manual method i.e. blood should be sucked by mouth of physician. After scratching the site blood letting should be done by means of the cow horn to which a piece of thin urinary bladder (of an animal) has been tied as a cover by a thread, till blood is sucked out by manual mouth suction.[8]

Following obstacles are faced by physicians

1. Sucking of blood by mouth is not suitable nowadays due to awareness of various infections like HIV, Hepatitis B, Venereal disorders etc. this is the main cause by which physician agonizing from Shringavacharana method in their surgical practice.
2. Suction of blood by mouth is a dexterous procedure, regarding establishment and maintenance of Human Mouth Aspiration Pressure during Shringavacharana.
3. Human Mouth Aspiration Pressure is varies from person to person so the successes & outcome of procedure gets alter accordingly. (Scholar conducted a survey study of Variation in Human Mouth Aspiration Pressure found significant variation person to person)
4 The Shringa (Horn) of cow is a biological element; it leads to putrefy as come contact with blood, so chances of infections increase accordingly. The sterilization of particular Shringa is doubtful.
5 The Prevention of Cruelty to Animals Act, 1960 the scarification of major Animals for any experimentation or uses of such Animal's organs for any purpose is prohibited by Govt. of INDIA.[10]
6 For establishment & popularization of Shringavacharana procedure in surgical practice, the traditional ways should be alter accordingly without change in principle of Ayurveda.

OBSERVATIONS & DISCUSSION

To counter the obstacles some modifications were made to the instrument. Two instruments were made in this study, one is Modified Shringa instrument and the other one being Optic fiber Instrument (prepared synthetically).

Modifications to classics (without changing in principles)

1. Mouth Aspiration replaced by Mechanical Aspiration
2. Aspiration force Measurable device (meter Gauge) attached.
3. Constant Aspiration force maintained.
4. Human Aspiration pressure calculated averagely by random selection of healthy 30 volunteers. The **Average Human Aspiration pressure is 219.66.**

Modified Shringa Yantra

It Consist of Following Parts

1) Furnished GoShringa
a. Nozzle for connection with vacuum pump.
2) Vacuum Pump
a. Liver
b. Handle
c. Vacuum Releasing Knob
3) Connecting Tubes
4) Meter Gauge (For Calculation of Applied Vacuum pressure) Unit mm of Hg

Above said parts are assembled to complete its final form (Image - 01) and functioning of the same was tested. Meter gauge ease the control of pressure in vacuum.

Optic Fiber Instrument (Image – 02)

It Consist of Following Parts

1) Optical fiber glass tube
2) Vacuum Pump
a. Liver
b. Handle
c. Vacuum Releasing Knob
3) Connecting Tubes
4) Meter Gauge (For Calculation of Applied Vacuum pressure) - Unit mm of Hg

Modifications to Modified Shringa Yantra

1. Instead to Shringa, optical fiber glass tube was used
2. Rest of the parts are assembled same as stated for Modified Shringa yantra
3. Constant aspiration force maintained.

Both Modified Shringa Yantra and Optic Fiber Instrument were prepared in lines with the classical. Slight alteration was made to ancient Yantra, which are not against the basic principles of bloodletting. Both instruments were tested for any variations in pressure gradient and it was found to be alike. Proper functioning of these two instruments was evaluated. Outcome of this was, Optic fiber Instrument is found superior to Modified Shringa Yantra. The disadvantages of Modified Shringa Yantra being, its brim of Shringa was not blunt which may cause injury while letting the blood. Non transparency of Shringa is an obstacle to monitor the amount of blood sucked. The Shringa is not easily accessible to all and choosing a suitable Shringa for procedure is a big task. Optic fibre instrument has answer to the above disadvantages. The proposed optic fibre instrument is easily assembled, acceptable to patients and physicians and prime advantage of it being, it can be sterilized, which checks the infection. By these two instruments, the pressure for sucking can be maintained constant, which helps in smooth letting of blood. The nozzle of suction pump facilitates control of release of pressure.

CONCLUSION

Raktamokshana is gaining popularity in Ayurvedic surgical practice. There was a need to popularize Shringa method of Bloodletting, in this regard the two instruments are proposed. These two special instrument works on basic principle of bloodletting. The alter instrumentation of Shringayantra is an acceptable form without changing the basic principle of classical Shringavacharana method. The Modified Shringa Instrument and Optic Fiber instrument help to suck the blood by means of negative pressure where the latter has more advantages than Modified Shringa. These instruments are best acceptable form for all Ayurvedic physicians, which can be practiced at OPD level also. The instruments are used in clinical research on Vicharchika with encouraging results. Both instruments have easy access, patients and physicians friendly qualities and can be considered as standardize form for bloodletting by Shringa method.

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Table – (01) Showing Specifications of Shringavacharana as per Classics

Description of Shringayantra in Classics[6,7]	
Category	Nadiyantra (Tubular Instrument)
Length	8 Angula -(Approximately -15.6 cm) [9] 10 Angula -(Approximately -19.5 cm) [9] 12 Angula -(Approximately -23.4cm) [9] According A.H. 18 Angula - (Approximately - 35cm) [9]
Openings	2
Major Opening Diameter	3 Angula (Approximately -5.85cm) [9]
Minor Opening Diameter	Sarshapavata (Approximately -1to 2 mm)[11]
Use	Aspiration of Blood or Dushta Stanya [12]
Doshaghnata	Vataghna
Area of working	Twakastha Dosha (Skin and Subcutaneous tissue) [13]
Guna (Properties)	Snigdha, Ushna[14]
Achushana Method	Manually
Aspiratory Force	219.66 mm of Hg (Average Calculated by Survey)

IMAGE – 01 MODIFIED SHRINGA YANTRA

IMAGE – 02 OPTIC FIBER INSTRUMENT