A Case study- Jalaukavacharan-Leech Therapy in management of Vranagranthi (Keloid)

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ABSTRACT

Keloid is a type of scar that results from the overgrowth of dense fibrous tissue which is usually develops after healing of a skin injury. In other words, it represents an abnormal scar formation. The tissue extends beyond the borders of the original wound and does not usually regress spontaneously. It causes cosmetic deformity, itching, pain, and stress ultimately resulting in compromised quality of life and diminished functional performance. The treatment of Keloid is often difficult because there is an associated high risk of recurrence. Vrana represents a vast part of Shalyatantra and the pathogenesis of Keloid is similar to Vrana granthi which has been explained as a growth of mass at the site of Vrana following dietetic complications or any physical irritation in a Vrana patient. Jalaukavacharan (leech therapy) is a parasurgical type of Raktabhemana and is considered as the most unique and effective method of bloodletting. Leeches are widely used in most disorders ranging from skin disease with evidence of successful results. In the present paper, an effort has been made to case of keloid that have been conducted in Ayurveda as parasurgical procedure.

Keyword: Vran, Vranagranthi, Keloid, Jalaukavacharan, Virudhdhahar

INTRODUCTION

Keloids are benign dermal, fibroproliferative growth, characterized by excessive formation of collagen, without any malignant potential. Keloids represent a pathological response to cutaneous injury resulting in disfiguring scars. Skin injuries such as burning, inflammation, surgery, or minor trauma such as insect bite induce an excessive extracellular matrix deposition, especially collagen. The term Keloid is derived from the Greek word, ‘khele’, which means crab claw.¹ Keloids can develop at every age but have a higher incidence between 10 to 30 years.² Although epidemiologic data are limited, they suggest differences among racial groups with a higher frequency in blacks, Hispanics and Asians.³

KELOID

Keloid is defined as excessive scar tissue that extends beyond the boundaries of the original incision or wound.⁴ It continues to grow. Etiology is unknown, but it is associated with elevated levels of growth factor, deeply pigmented skin, familial tendency and certain areas of the body, more common in the midline over the sternum, shoulder, lower neck in front and ear pinna.⁵ Females have a slightly higher incidence rate than males. The histology of Keloid shows excess collagen; especially more type III collagen with hypervascularity suggesting the pathology occurs in the remodeling phase. Clinically, Keloids extend beyond the boundaries of the original wound and rarely regress over time. They often arise immediately after skin injury and...
appear as firm nodules that are pruritic and painful. Itching is severe when exposed to sweat, dust and other allergens. Initially, they have a pink or red appearance and telangiectasia may be present. Keloids interrupt one’s quality of life, by having a feeling of being excluded from full social acceptance.

**VRANA GRANTHI**

Vrana patients should follow a strict Diet regimen even after healing of an ulcer. Vrana granthi is one among the nine granthis explained by Vagbhatacharyya. When a vrana patient consumes diets that include all the six rasas without any control amid the ulcer has not healed or just healed; or if vrana is not bandaged when still moist; or affresh injury by stones etc., there is vata dosha vitiation which affects raktaadhatu producing Vrana granthi. It is a hard mass associated with burning sensation and itching. It is considered as incurable by Acharya Vagbhata.

**Jalaukavacharan:**

As per Ayurveda, Jalaukavacharanis one of the procedures of Raktamokshana. Raktramokshana is the ancient bio-surgical procedure described by Sushruta. Ancient history suggests that lord Dhanwatari evolved in this world after Samudra manthan with Jalaukaalong with a pitcher filled with nectar in its hand. This shows the importance of Jala in the Indian system of medicine. Since Jala is their life or they are habituated to the water they are called Jalauka. Raktramokshana is indicated in the treatment of RaktaJroga. Individuals with aggravated imbalance between Raka and Pitta dosha and high levels of toxicity are recommended for Raktramokshana therapy. Leech Therapy has been practiced by Ayurvedic Physicians since ancient times.

Leech therapy is widely used in plastic and reconstructive microsurgery as the protective tool against venous congestion. Raktramokshana is also used as regimental therapy for the purification of vitiated body humors and should be done in the autumn season. Raktramokshanas of two types one is Shasra Vistravan: the use of sharp instruments for Raktramokshana including: Pracchana: letting the blood pass through several incision and second is Siravedha also known as Venipuncture, this includes Jalaukavacharan, Alabu and Shrunga. Out of these procedures Jalaukavacharan is the safest as no sharp instrument is used in this therefore this can be safely used in delicate people. Jalauka is commonly habituated in Jala, so it is cold in nature and commonly used in Rakta and Pittajroga.

**Indication:**

Indication of Jalaukavacharan in Ayurveda The specific indications of Jalaukavacharan which are mentioned in Ayurvedic text are Vidradhi(Abscess), Gulma(Abdominal Swelling), Arsha (Piles), Kushtha (Skin Disease), Vatarakta (Gout)Vidarika (Cracks), Vishadamsa(Insect Bite),

As Jalauka is indicated in diseases caused by vitiated and Rakta Pittadosha, it can be used in Raktrapradoshajvikars which are described in surastrohana of Charak Samhita. (Hemorrhagic Disorder), Vaivarnya(Discoloration of skin), Agnisada (loss of appetite), Pipasa(excessive thirst), Tamas Aidarshana (Frequent Blackout), Kandu (Itching) and TwakaVikara (Skin disorders).

**Complication of Jalaukavacharan:**

Here complications of Jalauka, after studying various research work some complication which were observed during Leech Therapy are listed below :

- Prolonged Bleeding time: The most common complication of leech therapy is Prolonged Bleeding time. Leech saliva contains
- Bacterial Infection: The most serious complication is infection at the site of bite. Infection can arise two to seven days after Leech therapy and may present as an abscess or cellulitis, with progression to sepsis possible, this gram-negative bacterium may cause infection.
- Allergic Reaction: Many patients may experience allergic reactions such as Erythema, Edema, Swelling with central black Eschar on biting point and sometimes Ulcerative Necrosis. These allergic reactions are the result of toxins found in Leech Saliva.
- Hypotension and Vasovagal attack: Some patients may experience sudden drop in blood pressure, fainting or severe complications like Vasovagal attack. This can be avoided by proper history taking
- Fever: Fever may be present due to bacterial infection or infected wound.
- Local Pain: Many patients experienced mild dragging pain just after the leech bite which subsided after a few minutes, due to the anesthetic effect of leech saliva. A rhythmic pulling sensation is usually noticed after the start of feeding.
- Itching: Mild itching may be present at the site of bite or a few days.

**Aim and Objectives:**

To estimate the efficacy of therapeutic procedure.

**Materials and Methods:**

All the literature related to Jalaukavacharan is collected from classical texts of Ayurveda, Various research publications and books. After a thorough study of research carried out in the field of Jalaukavacharan, the subject matter related to it was compiled and critically analyzed in this study. At Government Akhandanandayurved hospital, Ahmedabad OPD based patient with Jalaukavacharan Procedure done.

**A case study of Keloids:** In a case study a 35-year-old male patient having Keloid on both hands since 8 years, Patient came in opd of Government akhandanand ayurveda hospital, Bhadra, Ahmedabad with complaint of big scar of vrana(keloid) over both hands with itching, redness.

Present illness: Pt. was completely healthy before 8 years after that small boil develop over both hands and spread widely over it. Patient had taken levocetrizine and sofrymacine ointment for local application. Now he came here with complaint of big scar of vrana(keloid) over both...
hands with itching, redness. And want Ayurvedic treatment for further.

Past History: Small Boil like structure over both hands since 8 years.

Family History: Mother: HTN Since 5 Years

Medicine History: NO Any
Surgical History: NO Any
Implantation History: NO Any

Personal History:
Bp: 132/86 mmHg
Pulse Rate: 84/min
Respiration Rate: 14/min

Systemic Examination:
CNS: Conscious
CVS: S1S2 heard

Local examination:
1. By Darshan Pariksha: Twakutsedh over both hands, Redness present, Large surface area covered.
2. By Sparshan Pariksha: Thickness of over growth skin seen, Hard mass like structure feel.

Investigation:
Pre-operative assessment and patient care taken.

Procedure

Purvakarma:
- The following material should be arranged prior to the procedure, i.e. Proper place, Gauze piece, swabs, B.P. Apparatus, kidney trey, Nirvisha Jalauka, Haridra, Tape water, Needle no. 18 (if needed), Surgical Gloves
- Temperature – pulse – respiration and blood pressure should be noted prior to Jalaukavacharan. Routine blood investigations should be carried out as pre-operative assessment of the patient.
- Patient will advised for taking snigdha diet 1-2 hours prior to Jalukavacharan procedure.
- Take written consent of patient

Pradhan Karma:
- Patient has been taken in sitting position.
- Haridra with tape water has been taken to activate jalauka.
- Put jalauka on both hand and left it up to jalauka remove itself. Approx 30-45 mins.
- Jalaukavaman has been done with haridra powder.
- Where jalauka applied site of disease part cover with haridra for anti septic purpose.
- Check for vitals.

Pashchata karma:
- Procedure may repeated after 7 days.

(Source: GAAH, Ahmedabad)
Procedure: Done at Government Akhandanad Ayurveda Hospital, Bhadra, Ahmedabad

Treatment

The treatment of Keloids is difficult and often unsatisfactory. Several treatment modalities have been tried, but most of them have rendered disappointing results, especially when recurrence is concerned. The most commonly used treatments include intralesional steroid injection, interferon, 5-fluorouracil, imiquimod and laser therapy. Primary excision and cryosurgery are among the major surgical options. Radiation therapies and other physical modalities such as silicone gel sheeting and pressure therapy are possible alternatives. Among all of these treatment Ayurvedic para surgical procedure with Jalaukavacharan give significant and moderate improvement to symptoms of keloid. So, in research work Jalaukavacharan with 24 sitting in 6 month, 1 time / week with all normal pre-operative measures and patient care.

For Samsmans purpose:

1. Sudarshan Ghanvati: 2-0-2
3. Gandhak Rasayan-2-0-2
4. Advice to not take Virudhdha Ahar. Milk and salt consumption, Amla and Madhur Rasa, Equal quality of honey and Ghee, Non-veg diet with Milk.

Clinically, Keloids extend beyond the boundaries of the original wound and rarely regress over time. They often arise immediately after skin injury and appear as firm nodules that are pruritic and painful. Itching is severe when exposed to sweat, dust and other allergens. Initially, they have a pink or red appearance. Keloids interrupt one’s quality of life, for having a feeling of being excluded from full social acceptance.

DISCUSSION

In Ayurveda, Rasa has a very important role in treatment. The nidana of Vrana granthi include the consumption of diets of all the six rases which has a major role in its pathogenesis. An evaluation can be made relating the karma of each rasa and its effect on the healing of Vrana. Madhura rasa is sandhanakara and brimhana, but it is abhishyandi. Amla rasa causes paka by its agneya quality and also it vitiates rakta and mamsa. Lavana rasa increases potency of toxic materials, either ingested or metabolic end products in addition to vitiation of rakta and mamsa. Katu rasa cause depression of Vrana along with hemolysis and muscle depletion. Tikta rasa is visada, antitoxic, anti-inflammatory and it reduces pus and moisture. Kashaya rasa promotes healing and pacifies rakta. It is clear that apart from tikta rasa and kashaya rasa, other rasas harm the healing of Vrana. A wise intake of medicine and diet should be planned for proper healing of Vrana. So along with other nidana, simultaneous consumption of all the rasa in an unbalanced quantity hampers the healing process, aggravates vata and vitiates rakta in addition to the vitiation of kapha, meda and mamsa; which is general in all varieties of granthi, and produce Vrana granthi. Here the rakta vitiation can be regarded as hyper vascularity and vitiation of meda and mamsa as collagen excess constituting the pathogenesis of Keloid. As keloid is incurable disease by Acharya Vagbhatti. With para surgical procedure of Jalaukavacharan make moderate relief to patient and have 50 % relief in redness, itching and thikness of vrana granthi. Lecith therapy in Reconstructive Surgeries: The primary indication for use of leeches in the field of plastic and Reconstructive Surgeries is to prevent venous congestion of Flaps used for soft tissue coverage of defects. Leeches have been used in reconstructive surgeries like ear, nose, lip and digit replantation, surgeries of the maxillofacial region, breast flap (Mammoplasty) etc.In. This study moderate relief to symptoms by Jalaukavacharan Procedure. Thickness of scar, itching, redness reduced.

CONCLUSION

In the current era of dynamic life, people are reluctant to follow wholesome regimes and diets for being healthy. The same is the case of Vrana patient who may develop Vrana granthi. Vranagranthi can be correlated with abnormal scar formation i.e. hypertrophic scars and Keloids; the symptoms being severe in the latter. Vrana vaikrutapahachikitsa can be incorporated for the treatment of Keloid considering the unsatisfactory results of modern treatment.
practices. Quantitative and qualitative maintenance of *Rakta* (blood) is essential for a healthy life. Leech therapy helps to expel the impure blood from the body. It not only cures many diseases but it also has a preventive role. Moderated improvement with symptomatic relief seen in the patient. Para surgical Procedure with blood purification purposes fulfilled in the case study.

**REFERENCES**