

# Ayurvedic Review Article on Keloid

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**Abstract:** Keloid is a type of scar, which results from overgrowth of dense fibrous tissue that 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 deformities, itching, pain and psychological stress ultimately resulting in compromised quality of life and diminished functional performance. The treatment of Keloid is often difficult and frustrating because of the fact that there is an associated high risk of recurrence. Vrana represent the soul 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.

**Keywords:** keloid, vrangranthi, scar

## INTRODUCTION

Keloids are dermal proliferations of fibrous tissue that most often arise at sites of cutaneous injury and have significant impact on quality of life. Although keloids are seen in all populations, the highest prevalence is in people of color with an estimated incidence of 4–16% [1, 2]. These growths represent the most robust form of abnormal wound healing, presenting as raised, firm lesions that extend beyond the margins of original injury [2]. Several etiological factors have been proposed, including genetic and hormonal influences [3]. Increased wound tension has also been associated with keloid formation, although body locations with limited tension such as the earlobe are similarly affected [4].

Multiple hypotheses have been proposed for keloid formation. Though the pathogenesis of keloids is not fully understood, it likely involves the dysregulation of complex inflammatory pathways [5]. Proinflammatory cytokines IL-6 and -8 have been shown to increase scarring, while similarly, a decrease anti-inflammatory IL-10 increases scarring [6]. Keloidal fibroblasts and inflammatory cells may drive keloid formation by dysregulation of normal collagen turnover. Keloids are characterized by an increased

ratio of type 1 to type 3 collagen deposition in a haphazard pattern with increased fibroblast proliferation rates and increased sensitivity to growth factors [6, 7]. Differences in growth factor production could be due to epithelial-mesenchymal interactions, retention of fetal proliferative pathways, or the hypoxic keloidal tissue environment. Tissue tension has also been implicated as mechanical tension is a driver of fibroblast activity and formation of collagen. Certain inherited human leukocyte antigen subtypes have been associated with keloids, suggesting an abnormal immune response to dermal injury as a cause of keloids. Lastly, dermal injury causing an immune response to sebum, leading to cytokine release stimulating mast cell infiltration and fibroblast activity, has been suggested given the predilection for keloids to form in sites of increased density of pilosebaceous units [7].

## Definition

1. “Vrana gaatra vichurnane, vranayati iti vranah”  
Gaatra means tissue or part of the body. Vichurnane means destruction or break or rupture and discontinuity of the body or tissue. The destruction i.e. break or rupture or discontinuity of the body tissue or part of the body, is called Vrana.
2. “Vrunothi yasmat rudoapi vrana vasthu na nasyathi Aadehadharanath tasmaat vrana ithyuchyate budhai”  
As the scar of a wound never disappears even after complete healing and its imprint remains life long, it is called Vrana by the wise.
3. “Vivrunothiiti vrana” Vrana is that which exposes the internal structure.
4. “Vranayathi gatram vivarna vaivarnyam karotheethi vrana” Vrana is that which causes discolouration at the site where it had happened even after its healing.

## VRANA GRANTHI

Vrana patient should follow a strict regime even after healing of ulcer. Vrana granthi is one among the nine granthis explained by Vagbhatacharya. When a vrana

patient consumes diets which 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 afresh injury by stones etc., there is vata dosha vitiation which affects raktadhatu producing Vrana granthi. It is a hard mass associated with burning sensation and itching . It is considered as incurable by Acharya Vagbhata.

#### DISCUSSION

In Ayurveda, rasa has very important role in treatment. The nidana of Vrana granthi include consumption of diets of all the six rasas which has a major role in its pathogenesis. An evaluation can be made relating the karma of each rasa and its effect in 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 haemolysis 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 have adverse effect on 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.

#### CONCLUSION

Keloid is hypertrophic tissues are developed during scar formation. Also Vagbhatacharyahas been described that the same pathology of in the description of Vrunaghranthi. In this literature review found that, The Causes and pathology as well as the prognosis of disease is same as per modern and Ayurveda.

#### REFERENCES

[1] Robles DT, Berg D. Abnormal wound healing: keloids. *Clin Dermatol.* 2007;25(1):26–32. doi:

- 10.1016/j.clindermatol.2006.09.009. [DOI] [PubMed] [Google Scholar]
- [2] Bologna JL, Schaffer JV, Cerroni L, Callen JP. *Dermatology.* 4. Elsevier; 2018. [Google Scholar]
- [3] English RS, Shenefelt PD. Keloids and hypertrophic scars. *Dermatol Surg.* 1999;25:8. doi: 10.1046/j.1524-4725.1999.98257.x. [DOI] [PubMed] [Google Scholar]
- [4] Nemeth AJ. Keloids and hypertrophic scars. *J Dermatol Surg Oncol.* 1993;19(8):738–746. doi: 10.1111/j.1524-4725.1993.tb00418.x. [DOI] [PubMed] [Google Scholar]
- [5] Ogawa R. Keloid and Hypertrophic Scars Are the Result of Chronic Inflammation in the Reticular Dermis. *Int J Mol Sci.* 2017;18(3):606. [DOI] [PMC free article] [PubMed]
- [6] Berman B, Maderal A, Raphael B. Keloids and hypertrophic scars: pathophysiology, classification, and treatment. *Dermatol Surg.* 2017;43(Suppl 1):S3–s18. doi: 10.1097/DSS.0000000000000819. [DOI] [PubMed] [Google Scholar]
- [7] Al-Attar A, Mess S, Thomassen JM, Kauffman CL, Davison SP. Keloid pathogenesis and treatment. *Plast Reconstr Surg.* 2006;117(1):286–300. doi: 10.1097/01.prs.0000195073.73580.46.