

## Management of Keloid By Hirudo Therapy

Arsheed Iqbal, MD, Huma Haider, MD, Arjumand Shah, MD, Zahood Ahmad, MD, Naquibul Islam, MD

Address: RRIUM, Naseem Bagh Campus, Kashmir University-190006, Srinagar

E-mail: iarsheed@yahoo.com

\* Corresponding Author: Dr. Arsheed Iqbal, RRIUM, Naseem Bagh Campus, Kashmir University -190006, Srinagar

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### Abstract

**Observation:** According to Greek classical books leech therapy is the best way to overcome chronic inflammatory conditions. It has been proved that intervention causes reduction in oedema, pain and conjunction. Keloid were described by Egyptian surgeons around 1700BC. Alibert called the keloid first cancriod and later cheloide. Keloid usually grown beyond the borders of the original wound in claw-like growths and can develop after acne, body piercings, burns, laceration, surgical wounds etc. The aim of present study was to assess the effect of leech therapy in resolving the Keloid without surgical intervention and to avoid the scar formation and recurrence. The present study has been conducted at RRIUM, Srinagar to evaluate the keloid resolving activity by the bioactive substances present in the leech saliva. The study has proved very effective by giving the Hirduo therapy to a young female patient with post traumatic keloid above the knee joint, The keloid was completely resolved and there was no recurrence even after one year of post leech therapy follow ups.

### Introduction

Keloid were described by Egyptian surgeons around 1700 BC. *Boron Gean-Louis Alibert* identified the keloid as an entity in 1806. Change in the cellular signal that control growth and proliferation leads to keloid formation [1, 2, 3, 4]. Keloid usually grows beyond the borders of original wound usually develops after acne, boils, body piercing, burns, laceration and surgical wound. It expands claw-like growth over normal skin [2]. They are more commonly seen in central chest, back, shoulders, ear lobules, arm, pelvic region and collar bone. Keloid effects both sexes equally. The incidence in young females is more than young males and is more common in dark skinned people especially African races and shows genetic trait transmitted by mother or father with the children having 50 % possibility of developing a keloid scar



**Figure 1.** Patient of keloid at entry level



**Figure 2.** The sting of leech application



**Figure 3.** After completing the treatment healing of the lesion

[5]. In certain syndromes like *Rubinstein-Taybi* and *Goeninne*, it has been found that there is increased incidence of Keloid formation. Keloid may develop from pseudofolliculitis barbae, razor bumps and is also speculated to be hereditary. It is estimated that up to 4.5 % of general population suffer from hypertrophic scarring (2JCT). The incidence is 15 % higher in high pigmented people. People of any age can develop and children under ten are less likely to develop Keloid.

### Case Report

A 30 year old female patient came with keloid on her right leg above the knee joint. She had taken different treatment but no improvement was observed. Leeching was done after undergoing certain investigations including BT, CT, Hb, blood suger to rule out any pathology. After this screening leeching was done on day one. Leeches were applied to the site under all aseptic conditions. Leeches were allowed to suck on the keloid lesion till they get belly filled and fall of their own. After detaching of leeches antiseptic bandaging was done. Four sittings of leeching were done after every twenty days.

**Figure 1** depicts the patient with keloid at the time of clinical examination and registration. **Figure 2** depicts the sting of leech application. After the first follow up that is after twenty days the keloid lesion starts regressing and on the same day second sting of leeching was done. After completing third and fourth sting of leeching the keloid was fully vanished and after one week the scar mark also disappeared which is shown in **Figure 3**. After completing the treatment (leech therapy) the patient was followed up monthly for a period

of one year and it was observed that the keloid did not recure.

### Discussion

Keloids are fibrotic tumors characterized by atypical fibroblasts with excessive deposition of extracellular matrix components. It can cause significant pain, pruritis and most importantly physical disfigurement. Different treatment are available for keloid like surgery, radiotherapy, cryotherapy, steroids, laser therapy, interferon therapy, pulsed dye lamp treatment, use of selecon gel, retinoids, cytotoxic medicine etc [5, 6, 7, 8] (JCS). The above said modalities of treatment has side effects like telangiectasias (steroids), thinning of surrounding skin (steroids), cancer (radiotherapy), paleness of skin (cryotherapy), pain in the scar (cytotoxic medicine). Keeping in view the side effects and the chance of recurrence and ulceration it has been decided to use hirudo therapy as an alternative treatment for the treatment of the Keloid. In this case the patient was given four stings of leech therapy every after twenty days and was followed up monthly for a period of one year. It has been observed that three and half centimeter long and one centimeter thick keloid was completely resolved and there was also no scar formation.

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