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Research Article

### LEECH APPLICATION IN CASES OF PROCTALGIA FUGAX W.S.R. TO *GUDAARTI* – A CLINICAL STUDY

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#### ABSTRACT

Proctalgia fugax or *gudaarti* is an uncommon clinical condition, in which recurring attacks of distressing rectal pain with no positive local findings in the rectum or in anal canal are present. Leech therapy was done in ten diagnosed cases of Proctalgia fugax in OPD unit. Four follow up sittings at the regular interval of one week were done. Significant improvement in severity of pain and its frequency was observed. It can be concluded that leech application can be an option for such patients.

**Keywords:** Proctalgia Fugax, Vascular Congestion, *Gudaarti*, Rectal Pain, Leech Application.

#### INTRODUCTION

The name 'proctalgia fugax' was first given by Thaysen in 1935<sup>1</sup>. Proctalgia fugax is also known as levator ani syndrome or anal cold. This is an irregular episodic rectal pain. It could be caused by spasm or cramp of the levator ani or pubococcygeus muscles<sup>2</sup>. It usually happens in the middle of the night, usually lasts only for a few minutes<sup>3</sup>. It may follow straining at stool, sudden explosive bowel action or ejaculation. It is usually present in patients with undue anxiety or stress, and also it is said to afflict young medical students. Proctalgia fugax can be considered as "*gudaarti*" in the light of *Ayurveda*. *Acharya Charaka* has included "*gudaarti*" among eighty types of *Vataja nanatmaja roga*<sup>4</sup>. *Acharya Sushruta* has also described the pain originating from rectum and radiating to lower side as "*tuni*", among *vata vyadhi*<sup>5</sup>. As pain itself is considered as *vatajanya*, proctalgia is purely *vataj* disease according to *ayurveda*.

In a study of 1809 patients of anorectal complains, 54 were having proctalgia fugax (prevalence 3 percent). The attacks occurred in the daytime (33 percent) as well as at night (35 percent) and the average number of attacks was 13. The average age of onset was 51 years. Study showed that women are affected more commonly (69 percent) than men<sup>6</sup>. However, its prevalence in the general population ranges from 4% to 18%. The diagnosis is based on the existence of distinguishing symptoms as defined by Rome III guidelines<sup>7</sup> and physical examination.

**Rome III guidelines** are as follows:

1. Recurrent episodes of pain localized to the anus or lower rectum
2. Episodes last from seconds to minutes
3. There is no anorectal pain between episodes For research purposes criteria must be fulfilled for 3 months; however, clinical diagnosis and evaluation may be made prior to 3 months.

The mainstay of treatment is simply reassurance, counseling and topical treatment<sup>8</sup>. Treatment includes warm baths, topical treatment with glyceryl trinitrate or diltiazem, low dose diazepam at bedtime and salbutamol inhalation. In persistent cases, pudendal nerve block, clonidine or Botox injections can be considered. It is not known to be associated to any disease process and data on the number of people afflicted varies, but is more prevalent than usually thought.

Few studies have suggested that sudden vascular congestion analogous to migraine may be the precipitating mechanism<sup>9</sup>. In these studies, it was observed that the attacks of Proctalgia fugax evoke triad of swollen mucosa, prominent vessels, and obstruction at the recto-sigmoid which recall the episodic vascular attacks involving the superficial temporal artery in cases of migraine. Leech application is best way to reduce vascular congestion in rectal plexus. Present clinical study was conducted in cases of proctalgia fugax by applying leeches in peri-anal region.

#### AIMS AND OBJECTIVES

The present study was conducted to study the effect and efficacy of leech application in cases of Proctalgia fugax.

## MATERIALS AND METHODS

- a. **Subject:** Ten patients were selected, who were fulfilling the Rome III criteria of Proctalgia fugax w.s.r. to *gudaarti*, and having no other ano-rectal or general disorder, irrespective of religion, sex, occupation and socio-economical status.
- b. **Source of subject:** All patients, finally diagnosed with proctalgia fugax were selected randomly from OPD of *shalya tanta*, fulfilling inclusion and exclusion criteria.
- c. **Study design:** It was a randomized open trial for the assessment in the symptomatic and subjective evaluation in the patients of proctalgia fugax.
- d. **Adjuvant therapy:** Hot Seitz bath, *jatyadi* oil application on site of leech application and in anal canal after 24 hours, *Triphala churna* 5 gram with Luke warm water at bed time as a laxative was advised to all patients.
- e. **Inclusion criteria:** Patients evaluated through Rome III criteria for diagnosis of proctalgia fugax. Patients who were fulfilling the above criteria were selected for clinical study.
- f. **Exclusion criteria:**
  1. Patients having complained of bleeding per anum.
  2. Diagnosed cases of any organic disease of anal canal viz. haemorrhoid, fistula in ano, fissure, papilloma, prolapsed of rectum, perianal abscess etc.
  3. Post operative cases of any anal surgery.
  4. Patients having any blood dyscrasias.
- g. **Diagnostic criteria:** Rome III guidelines were considered as diagnostic criteria, which is as follows:
  1. Recurrent episodes of pain localized to the anus or lower rectum

2. Episodes last from seconds to minutes
3. There is no anorectal pain between episodes
- h. **Investigation:**
  1. Blood investigation: Complete blood count, bleeding time, clotting time, fasting blood sugar, HIV, HBsAg.
  2. General examination: pulse rate, blood pressure, temperature, pallor, edema, cyanosis, chest auscultation,
  3. Ano-rectal examination: Examination with finger as well as proctoscopic examination was done to rule out any other organic cause.
- i. **Leech application sittings, duration of treatment and follow-ups:** Four sittings of leech application, at the regular interval of one week were done under full aseptic precaution. Leech application at peri-anal region was done in cases of proctalgia. Two to three leeches on either side of anal verge were applied. Dressing with *haridra churna* was done with tight t-bandaging. Patients were called for next week for further follow-ups.

### CRITERIA FOR ASSESSMENT

Severity and frequency of pain was included as criteria for clinical assessment.

1. Pain
  - no pain = 0
  - Mild pain = 1
  - Moderate pain = 2
  - Severe pain = 3
2. Frequency of episode
  - Never in a week = 0
  - Once a week = 1
  - Twice a week = 2
  - More than twice a week = 3

### Observations:

Sr. no.	Criteria	Mean value		D	%	S.D. (±)	S.E.	t value	p value
		B.T.	A.T.						
1.	Pain	2.3 ±0.483	0.4 ±0.516	1.9	82.61	0.316	0.100	18.987	<0.02
2.	Frequency of episode	2.5 ±0.527	0.2 ±0.422	2.3	92.0	0.483	0.153	15.045	<0.05

## RESULTS

After leech application, 82.61% improvement was seen in severity of pain of patients of proctalgia fugax. The statistical analysis shows that p-value is <0.02, which indicate that markedly significant result. Weekly frequency of episodes also found to be reduced. 92% improvement in frequency parameter along with p-value <0.05 shows significant result of observation.

## DISCUSSION

As per the concern of etiology of proctalgia, according to modern science is not very clear. It was assumed in this study that it may be due to vascular congestion of rectal plexus of veins, and leech can be an effective approach of treatment. The present study clearly shows that leeches have the property

to decrease the venous pooling and improve the blood circulation in rectal plexus. Enzymes present in the saliva of leech (*Hirudo medicinalis*) are responsible for thrombolytic activity in circulation. However, leech application have been shown very effective in arterio-venous diseases like varicose veins, deep venous thrombosis, calf muscle pain, varicocele, prolapsed and thrombosed pile mass etc. Saliva of leech contains many substances like hirudin, calin, destabilase, hirustasin, bdellins, hyaluronidase, tryptase inhibitor, eglins, Factor Xa inhibitor, complement inhibitors, carboxypeptidase A inhibitors, histamine like substances, acetylcholine and anesthetics substances. These substances are responsible for various bio-chemical and neuro chemical changes in human body in natural way. Leech itself is responsible for suck impure (*ashudhha rakta*) blood and as soon as it gets pure blood, stops sucking itself.

## CONCLUSION

Proctalgia fugax or *gudaarti* can be treated effectively by leech therapy. This method is safe, cheap and easily available. The above study is very limited as the person suffering with proctalgia is not very common. However, need of further research in this context is required.

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