

ROLE OF EMERGENCY *PRACCHAN, LEKHAN KARMA (FASCIOTOMY & DEBRIDEMENT)* ON CELLULITIS WITH NECROTIZING FASCIITIS W.S.R. TO *NIJA & AAGANTUJ VRANASHOPHA*

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ABSTRACT

Today's lifestyle is causing many diseases which come under umbrella of lifestyle disorders. This is resulting in increasing incidences of DM, HTN, and IHD & Obesity like conditions in the society. Along with these, external trauma to the body may cause cellulitis. The people working in garages, painters, carpenters and hard workers are more prone to trauma. They do have tendency to neglect the trauma, which leads to Cellulitis (*Vranashopha*). It is observed that occurrence of Cellulitis is more seen in summer & during the start of winter as climatic conditions are more favorable for micro-organisms like Staphylococcus, Streptococcus etc. Signs & symptoms of *Pakwavastha of Vranashopha* are very similar to Cellulitis with necrotizing fasciitis. Emergency management of this condition is Fasciotomy, Debridement & antibiotics. In spite of this, many patients land in to Compartment syndrome with severe septicemic shock and multi-organ failure. In Sane Guruji Hospital OPD & IPD, more than 30 patients of Cellulitis [*Vranashopha*] were examined with mild to severe symptoms of *Vranashopha*. These patients were treated with emergency Fasciotomy & Debridement [*Pracchan, Lekhan karma*] with concomitant therapy & few patients were treated with conservative treatment. In this study, the Role of Emergency *Pracchan, Lekhan karma* (Fasciotomy & Debridement) on Cellulitis with Necrotizing fasciitis w.s.r. to *Nija & Aagantuj Vranashopha* is discussed.

Keywords: *Pracchankarma*: Fasciotomy, *Lekhanakarma*: Debridement

INTRODUCTION

Vranashopha [wide spreading cellulitis] is very common among the patients of diabetes, hypertension, obesity like systemic diseases and to the people who are susceptible to external trauma like heavy workers and carpenters. Negligence of which leads to spreading of cellulitis with necrotizing fasciitis.

- a. If diseases are not treated properly (*Nija Vranashopha*)
- b. Professions like carpentry, fabrications etc, are more prone to trauma. Mild to severe trauma may leads to cellulitis & untreated conditions may land the patient into

life threatening conditions like shock (*Marmopaghat*), compartment syndrome with multi organ failure. It can result in more serious consequences like sacrifice of the affected part (in both *Nija* and *Aagantuj Vranashopha*) and death.

Sushrutacharya quoted that treatment for *Aatyayikawastha* should be done like an emergency management of burning house. It can be correlated With *Pracchan, Lekhan, Karma, etc...* which is helpful to improve patient's general condition like hypotension, dehydration and decreased urine output, uremia, multi or-

gan failure (signs & Symptoms of septicemia). These surgical procedure described in Ayurvedic text constitute a significant contribution to existing knowledge.

More than 30 patients visited at Sane Gurujirugnalaya in the last three months. These patients were treated with *Pracchan & Lekhana Karma*. Very encouraging results were observed with healthy & improved wound healing [*Shuddhavrana*]. In this research paper, role of the *Pracchan, Lekhana karma* [Fasciotomy & Debridement] in *Pakwavastha* of *Nija* and *Aagantuj Vranashopha* [spreading cellulitis with necrotizing fasciitis] is discussed.¹

AIM: Study the role of emergency *Pracchan, Lekhan, karma* [Fasciotomy & Debridement] on *Nija & Aagantuj Vranashopha* [Cellulitis with necrotizing fasciitis].

OBJECTIVE:

- Study the role of Emergency *Pracchan, Lekhan karma* [Fasciotomy & Debridement] on *Nija & Aagantuj Vranashopha* [Cellulitis with necrotizing fasciitis].
- To study *Marmopaghat* i.e. Septicemic Shock & Life threatening condition due to septicemia.
- To re-establish ancient principles of surgery in present context.

MATERIAL & METHODOLOGY

A] Literature review:-

Fasciotomy (*Pracchan karma*):- According to *Sushrutacharya*, *Raktavistravan* is done by two methods i.e. with the help of *Shashtra* & without help of *Shashtra*. *Raktavistravan* with the help of *Shastras* subdivided in two types - *Pracchan* and *Siravyadha*.² *Dushit Raktadhatu* located at any part of body superficially is treated by *Pracchan karma*, clotted blood is drained by *Shrungadi* and *dushit Raktadhatu* is

treated by *Siravyadha*. A *Pracchan karma* must be straight (*saral*), appropriately incised (*asamkirna*), (*sukshma*), equal (*Saman*), *naati-gambhir* or *naati-uttan*.³

Draining of *dushit Raktadhatu* releases the pressure of tissue exerted by inflammatory, ischaemic changes and immediate improvement in symptoms like pain, disease intensity is seen.⁴

Instruments used in Emergency *Pracchan karma*: [Fasciotomy]

Needle, Hawk bill scissors, Scissors, Curved bistoury, Pagets knife.

Debridement (*Lekhana karma*):- *Sushrutacharya* described *sixty Vrana Chikitsa Upakarmin Dwivraneeya Chikitsa Adhyaya*. *Lekhana karma* can be used in a rough, irregular hyper granulated tissue over affected area.⁵

Instruments used in Emergency *Lekhana karma* [Debridement]:

Round handed knife, Curette, Scalpel.

Incision: *Sushrutacharya* stated that the width of incision over muscle should be thin like *Yava* & at other parts it must be half of *Yava* or *Yavamatra*. For this *Vrihimukhayantra* (Thin Trocar & Cannula) should be used. On the bony area, it must be done by *Kutharika* (Axed shaped knife or chisel).

B] Clinical study:

Study design:

Simple, random open clinical study of 30 patients of *Aagantuj Vranashopha* [cellulitis] in last 3 months, visited to our OPD & IPD basis, irrespective of gender, religion, occupation & economic status. Informed written consent is taken prior to treatment.

Age group- above 18 years

Investigations:

Haemogram, BSL [R], Urine, Wound C/S [sos], RFT, HIV & HbsAg, BT, CT.

ECG, Chest X-Ray.

Place of work: MAM'S SGAK, MAL-WADI HADAPSAR, PUNE

Previous Work: No reference of previous study found.

Material & Methods:

Inclusion criteria:

Size of cellulitis area- more than 15 cm

Age – Above 18 Years

All cases of spreading cellulitis which shows life threatening signs & symptoms.

Exclusion criteria:

Size- less than 15 cm

Vedana (Pain): Grade 0: NoVedana

Grade 1: Mild

Grade 2: Moderate

Grade 3: Severe intolerance.

Strava(Discharge): Present or Absent

Akruti(Size in length):1] More than 15 cm 2] Less than 15 cm.

Gandha (Odor) : Present or Absent.

Sparsha(Local hyperemia): Ushna(present) or Sheeta(not present).

Jwara(Fever):Present or Absent.

Observation & Result:

In thirty Patient treated with *Pracchan&Lekhan, Darankarma* [Fasciotomy& Debridement] significant improvement was observed. The life threatening conditions were managed well.

▶ Amongst 30 patients- 20 patients found significant relief by emergency*Pracchan, Lekhan, Daran* (Fasciotomy&

All cases of *Vranashopha* [cellulitis in early stage] i.e. *Amavastha*

Procedure- Pracchankarma -11 no blade on scalpel

Directly on affected part, straight, deep up to fascia or drainage of collected discharge. Necrosed area is completely part is excised. This is extended to healthy tissue. Debridement was done with curette of affected part and all unhealthy tissue was removed.

ASSESSMENT CRITERIA

debridement) with concomitant therapy.

- ▶ 5 patients got relief from conservative treatment.
- ▶ 4 patients were drop out.
- ▶ 1 patient died due to complication with severe septicemia and multi organ failure.

Table No .1: Statistical analysis of patient data for *Vedana*

| Vedana | Mean | | % Relief | Wilcoxon Signed Rank Z Statistic | P-Value | Result |
|--------|------|------|----------|----------------------------------|---------|--------|
| | B.T | A.T | | | | |
| | 2.72 | 0.04 | 98.52941 | -4.620 ^a | <0.001 | HS |

Using Wilcoxon Signed Ranked Test, Since P-Value is less than 0.001 the effect of treatment on *Vedana* is Highly Significant.

Graph No. 1: Graphical presentation of patient data for *Vedana*

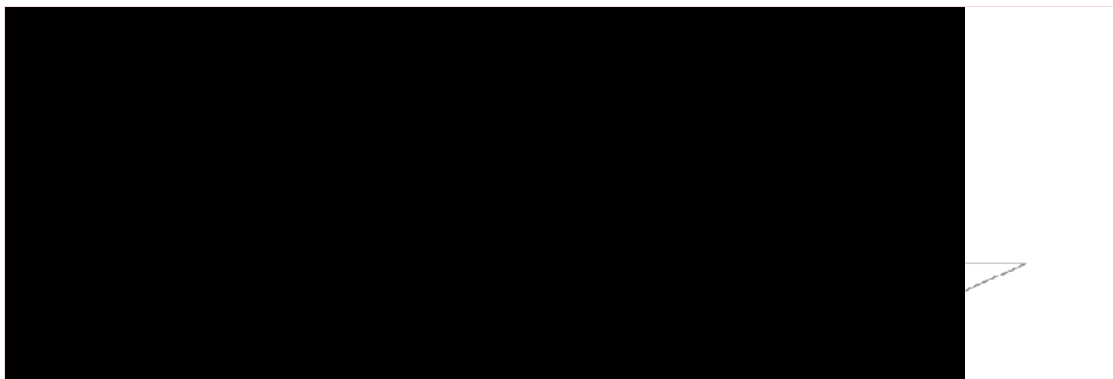
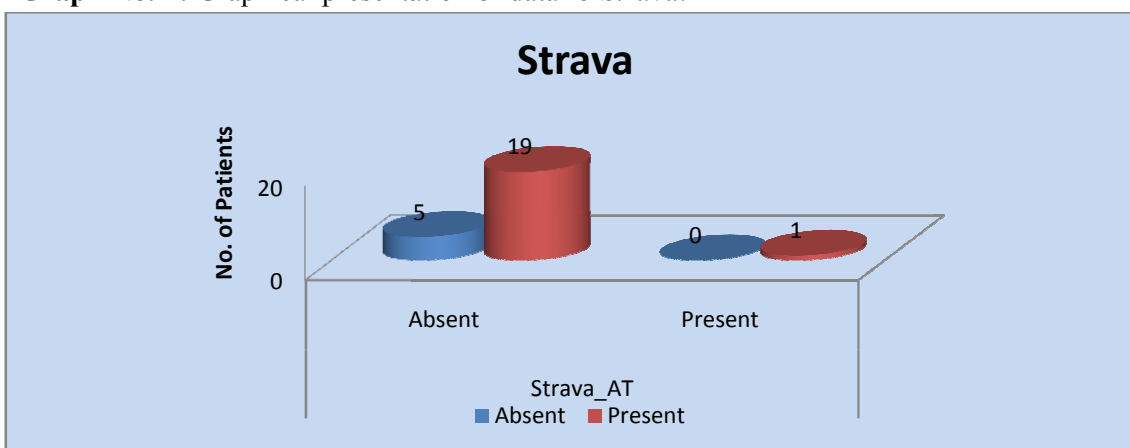


Table No .2: Statistical analysis of patient data for *Strava* in Tabular form.

| Strava_BT | Strava_AT | |
|-----------|-----------|---------|
| | Absent | Present |
| Absent | 5 | 0 |
| Present | 19 | 1 |

| | Strava_BT&Strava_AT |
|--------------|---------------------|
| N | 25 |
| P-Value | <0.001 |
| Significance | HS |

Graph No. 2: Graphical presentation of data for *Strava*.



Before treatment strava was present in 20 patients and absent in 5 patients, while after treatment strava was present in only 1 patients and was absent in 24 patients

hence significant result in strava after treatment were observed.

Using McNemar’s Test, Since P-Value is less than 0.001 the effect of treatment on-Strava is Highly Significant.

Table No .3: Statistical analysis of patients data for *Jwara* in Tabular form.

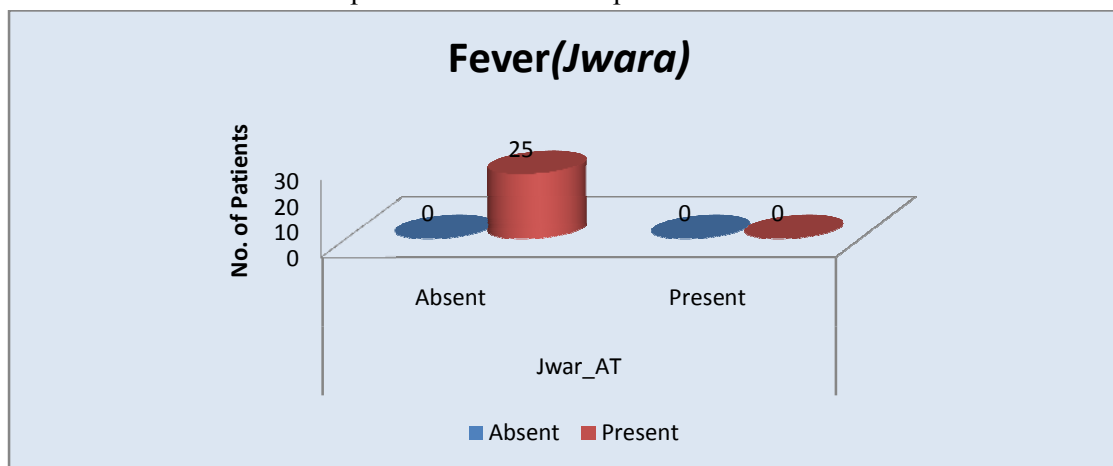
| Jwara_BT | Jwara_AT | |
|----------|----------|---------|
| | Absent | Present |
| Absent | 0 | 0 |
| Present | 25 | 0 |

| | Jwara_BT&Jwar_AT |
|--------------|------------------|
| N | 25 |
| P-Value | <0.001 |
| Significance | HS |

Before treatment *jwara* was present in 25 patients and absent in 0 patients, while after treatment *jwara* was present in 0 patients and was absent in 25 patients hence

we can observe significant result in *jwara* after treatment.

Graph No. 3: Graphical presentation of patient data for *Jwara*

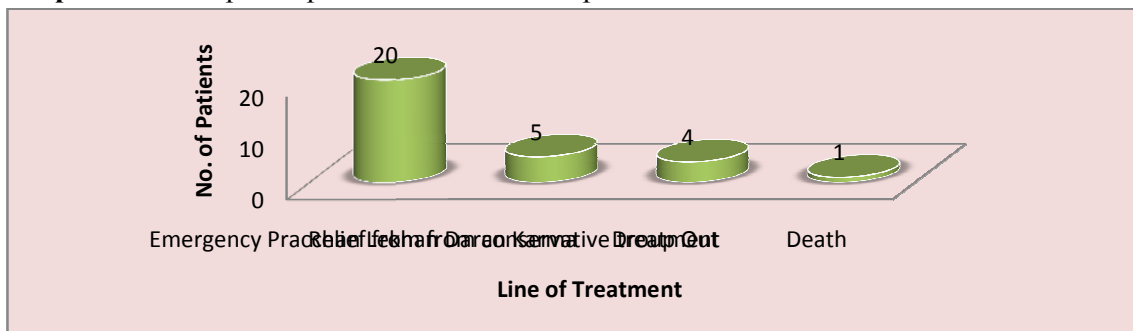


Using McNemar’s Test, Since P-Value is less than 0.001 the effect of treatment on *Jwarais* Highly Significant.

Table No .4: Statistical analysis of patient data – result.

| Procedure | Frequency | Percentage |
|--|-----------|------------|
| Emergency PracchanLekhanDaran Karma | 20 | 66.7% |
| Relief from conservative treatment | 5 | 16.7% |
| Drop Out | 4 | 13.3% |
| Death | 1 | 3.3% |
| TOTAL | 30 | 100% |

Graph No. 4: Graphical presentation of treated patients .



DISCUSSION

According to *Sushrutacharya*, *Raktavistravan* is done by *Shashtra (Pracchan)* which is helpful for drainage of *Dushit Raktadhatu* at affected part of body. When all *dushit Raktadhatu* is drained out, pressure of collected sero-sanguineous or serous or blood below the fascia or in muscle plane or in subcutaneous level is released. This reduces chances of anaerobic infection and regain of healthy tissue, there was immediate relief in pain & decrease in disease intensity were noticed.

Lekhana karma is one among-*Shashthi Upakrama* done in grossly *dushitvrana* with irregular margins and surface, discharge with unpleasant odour. After *Lekhana karma* all dead part was removed.

If Cellulitis is not treated early may result into necrosis of tissue & several other hazardous complications mentioned above. In the procedure Fasciotomy, pressure of inflammatory exudates were drained out, which improves cellular proliferation and healthy tissue regeneration. Wound healing occurs rapidly and irreversible. Cell injury was minimal & necrosis of tissue was prevented.

In the procedure Debridement necrotic tissue & slough was removed till the appearance of fresh bleeding. After re-

moving slough with daily dressing and high protein diet resulted in early wound healing and healthy granulation.

When wound became healthy and cherry red colored with granulation, skin grafting were done (*Sandhan karmatwakpratyaropanchikitsa*). Rapid recovery were noticed of these patient. Rate of complications were prevented by early *Pracchan* (Fasciotomy) and *Lekhana* (Debridement) in Cellulitis w.s.r. to *Nija & Aagantuj Vranashopha*.

Shodhanchikitsa in Aatyayikchikitsa of Ayurveda is more effective & life-saving treatment as compared to *Shaman chikitsa in Pakwavastha of Nija & Aagantuj Vranashopha*. Thus it was found that ancient principles of surgery are still compatible and helpful in contemporary era.

CONCLUSION:

- Emergency *Pracchan, Lekhan, etc...karma* [Fasciotomy & Debridement] was significantly effective in *Pakwavastha of Nija & Aagantuj Vranashopha*. [Spreading cellulitis with necrotizing fasciitis].
- Fast improvement in patient's general condition.
- Grafting is required for better outcome.

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Source of support: Nil
Conflict of interest: None Declared

