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 [Pracchhan, Lekhan karma] with concomitant therapy & few patients were treated with conservative treatment. In this study, the Role of Emergency Pracchhan, Lekhan karma (Fasciotomy & Debridement) on Cellulitis with Necrotizing fasciitis w.s.r. to NiJa & AagantujVranashopha 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 (NiJaVranashopha)
b. Professions like carpentry, fabrications etc, are more prone to trauma. Mild to severe trauma may lead 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 AagantujVranashopha) and death. Sushrutcharya quoted that treatment for Aatayikawasthashould be done like an emergency management of burning house. It is can be correlated With Pracchhan, 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 Pracchhan & Lekhana Karma. Very encouraging results were observed with healthy & improved wound healing [Shuddhavrana]. In this research paper, role of the Pracchhan, Lekhana karma [Fasciotomy & Debridement] in Pakwavastha of Nija and AagantujVranashopha [spreading cellulitis with necrotizing fasciitis] is discussed.¹

AIM: Study the role of emergency Pracchhan, Lekhan, karma [Fasciotomy & Debridement] on Nija & AagantujVranashopha [cellulitis with necrotizing fasciitis].

OBJECTIVE:
- Study the role of Emergency Pracchhan, Lekhan, karma [Fasciotomy & Debridement] on Nija & AagantujVranashopha [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 contest.

MATERIAL & METHODOLOGY
A] Literature review:-
Fasciotomy (Pracchankarma):- According to Sushrutacharya, Raktavistravan is done by two methods i.e. with the help of Shastra & without help of Shastra. Raktavistravan with the help of Shastrais subdivided in two types - Pracchhan and Siravyadha.² DushitRaktadhatu located at any part of body superficially is treated by Pracchhan karma, clotted blood is drained by Shrungadi and dushitRaktadhatu is treated by Siravyadhya. A Pracchhan karma must be straight (saral), appropriately incised (asamkirna), (sukshma), equal (Saman), naati-gambhir or naati-uttan.³

Draining of dushitRaktadhatu 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 Pracchhan karma: (Fasciotomy)
- Needle, Hawk bill scissors, Scissors, Curved bistoury, Pagets knife.

Debridement (Lekhana karma):- Sushrutacharyadescribed sixty VranaChikitsaUpakarmin 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: Sushrutacharyastated 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 AagantujVranashopha [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: No Vedana
Grade 1: Mild
Grade 2: Moderate
Grade 3: Severe intolerance.

Strava (Discharge): Present or Absent


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 Pracchhan & 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 Pracchhan, Lekhan, Daran (Fasciotomy & 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

<table>
<thead>
<tr>
<th>Vedana</th>
<th>Mean</th>
<th>% Relief</th>
<th>Wilcoxon Signed Rank Z Statistic</th>
<th>P-Value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.T</td>
<td>A.T</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.72</td>
<td>0.04</td>
<td>98.52941</td>
<td>-4.620³</td>
<td>&lt;0.001</td>
<td>HS</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Strava_BT</th>
<th>Strava_AT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absent</td>
<td>Present</td>
</tr>
<tr>
<td>Absent</td>
<td>5</td>
</tr>
<tr>
<td>Present</td>
<td>19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strava_BT&amp;Strava_AT</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>P-Value</td>
</tr>
<tr>
<td>Significance</td>
</tr>
</tbody>
</table>

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 patient 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.

<table>
<thead>
<tr>
<th>Jwara_BT</th>
<th>Jwara_AT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absent</td>
<td>Present</td>
</tr>
<tr>
<td>Absent</td>
<td>0</td>
</tr>
<tr>
<td>Present</td>
<td>25</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Pracchan Lekhan Daran</td>
<td>20</td>
<td>66.7%</td>
</tr>
<tr>
<td>Relief from conservative treatment</td>
<td>5</td>
<td>16.7%</td>
</tr>
<tr>
<td>Drop Out</td>
<td>4</td>
<td>13.3%</td>
</tr>
<tr>
<td>Death</td>
<td>1</td>
<td>3.3%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>30</td>
<td>100%</td>
</tr>
</tbody>
</table>
DISCUSSION

According to Sushrutacharya, Rak-tavistravan is done by Shastra (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-sangeious 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- ShashthiUpakramadone in grossly dushit-vrana 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 removing 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 karma-twakpratyaropanchikitsa). Rapid recovery were noticed of these patient. Rate of complications were prevented by early Pracchan (Fasciotomy) and Lekhana (Debrigement) in Cellulitis w.s.r. to Nija&AagantujVranashopha.

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

CONCLUSION:

- Emergency Pracchan, Lekhan, etc...karma [Fasciotomy & Debride-ment] was significantly effective in Pakwavastha of Nija&AagantujVranashopha.
- Fast improvement in patient’s general condition.
- Grafting is required for better outcome.

REFERENCE

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