"A Clinical study to evaluate the Shodhan karma of Saptaparnipatra kwatha in Management of Dushta vrana"

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ABSTRACT
Ayurveda is the ancient science which is spread worldwide which is as old as mankind. It contain all type of specialty and the scope is getting increased day by day. Shalya tantra is the branch which is explained very widely in the ayurvedic text. Many types of diseases and its management is explained in brief. In day today life we come across many cases of infected wound. Its healing is being major problem from ages in surgical practice. It is the natural phenomena influenced by systemic and local factor. A clean wound in the normal body heal with the minimum scar but it takes more time to heal in the contaminated wound i.e dushta vrana. After consumption of many antibiotic and other medicine, many of them do not get rid from it and day by day wound get infected. There are many other reasons for wound to get infected eg. Hygiene, not taking good care of wound, resistance of bacteria to multiple antibiotic due to there over consumption. Because of all these many people do not go to the society for social gathering and may more reason. After trying so hard to get rid from wound some of them get affect to many other diseases.

INTRODUCTION
Dushtavrana (Infected wound) is very well described in Ayurveda text of Sushrut samhita. Acharya Sushrut is father of surgery in Sushrut Samhita Sutra Sthana 21 he has described types of dushtavrana, its smell, shape, pus discharge, treatment and many more according to dosha. In day today life and according to hygiene and immunity care people are getting more prone to Ayurvedic treatment for many diseases. Acharya Sushrut has described the Ruhyamana Vrana, Samyaka Rudha Vrana, and Dushtavrana on the basis of ancient pathophysiology of wound. He has also described the types of wound in two categories mainly Nija and Agantuja. Usage of various types of leaves or soil was the treatment to arrest bleeding. Quest for knowledge by ancient people led to many investigations and assumptions. Gradually dravyas with better results were selected and tried in different forms.

In healing of Vrana, local treatment is also important along with oral medications. Dushtavrana is an ulcer with profuse discharge and slough, where clearing slough and enabling drug to reach the healthy tissue is more important. Slough can be cleared by using surgical instruments or oxidizing agents where healthy granulation tissues may be damaged.

AIMS AND OBJECTIVES
AIM : A clinical evaluation of Shodhana Karma of Saptaparnipatra kwatha on Dushta vrana.
OBJECTIVES
1. To evaluate the Shodhana Karma of Saptaparni patra kwatha in Dushta vrana shodhana.

DUSHTA VRANA

NIRUKTI OF VRANA:

- Destruction of damage of tissue in a particular part of body in vrana (Su.Chi.1/6).

SAMPRAPTI
Vata, Pitta and Kapha dushti occurs due to their respective causes and get located in the external passage (Bahirmarga Samashrita) and thus produce Nija (innate) Vrana eg. Madhuhmehaja Vrana, Kushtaja Vrana.
LAKSHANA OF DUSHTA VRANA

LAKSHANA: According to many Granthas there are different types of dushta vrana lakshan explained in their Grathas, they are as follows

SUSHRUT (Su.Su.22/7)
Atisavruta, Ativivruta, Atikathin, Atimrudu, Utsanna, Atiussha, Ativismay, Atipuyastravi, Unmargi, Utsangani, Manodnya, Darshana, Durgandhi, Atevedena, Daha, Raga, Paka, Kamdu, Shopa, Dirghakalanubandhi.

TYPES OF WOUND ACCORDING TO AYURVEDA
Sushruta have described six types of dushta vrana in their Granthas they are as follows (Su.chi.2/10,11,19,20,21,22)
1. CHINNA VRANA
2. BHINNA VRANA
3. VIDDA VRANA
4. SHATA VRANA
5. PICCHIT VRANA
6. GHRUSTA VRANA

SUDDHA VRANA
Definition: The vrana which is free from doshik involvement with suddha lakshanam is called suddha vrana.

SUDDHA VRANA LAKSHANA ACCORDING TO SUSHRUT (Su.Su.23/18)
Suvyavasthita, Jivhatalabha, Mrudu, Shlaksha, Avedana, Sam, Vranosthashyava, Pidikayukta

TYPES OF WOUND ACCORDING TO MODERN (FOUR TYPES)
1. INCISED WOUND.
2. LACERATED WOUND.
3. PENETRATING WOUND.
4. CRUSHED WOUND.

REVIEW OF DRUG
SAPTAPARNI
- GANA: Tiktaskand, Agragvadadi, Kusthagna
- FAMILY: Apo-cynaceae, Kutaj kula.
- LATIN NAME: Alstonia scholaris
- RASA: Tikta, Kashaya
- VEERYA: Ushna
- VIPAKA: Katu
- GUNA: Laghu, Snigdha
- KARMA: Vrana Sodhana, Vranaropan, Vataghna, Krumighna.

Ingredient: Saptaparnipatra churna, Water.
16 part of water added in 1 pal i.e 40mg of Saptaparnipatra churna.
The vessel kept on gas for boiling at low flame till it remains 1/8 part of decoction.
The kwatha was filtered by a cotton cloth.
These kwatha was used in koshna form for Vrana Dhawana.
The kwatah was newly prepared for every dressing and same was again used in evening for second dressing after doing koshna.

BETADINE SOLUTION
Antiseptic povidone - iodine solution i.e fast acting broad spectrum antiseptic.
Betadine kills bacteria and antibiotic resistant organism as well as fungi, yeast, viruses, protozoa.

**Ingredient-**
- Povidone- iodine 2 % (0.5 % available iodine).
- Inactive ingredient-
  - Purified water
  - Citric acid
  - Dibasic sodium phosphate
  - Glycerine
  - Nonoxynol-9
  - Sodium chloride
  - Sodium hydroxide.

**Study Analysis**
Total 60 patient were selected Randomly for the study by seing the signs and symptoms of dushta vrana.

1) **Group ‘A’** – Trial group 30 patient were treated with Saptaparnipatra kwatha.
2) **Group ‘B’** – Control group 30 patient were treated with Betadine solution.

Alternate day cleaning and dressing done under all aseptic precaution.in the period of 14 days.

**Inclusive criteria**
- Patient of age group above 16 yrs. and below 60 yrs.
- Patient of both sex diagnosed as case of Dushta vrana.
- An infected wound of size upto 5 to 7cm which fails to heal in 7days.

**Exclusive criteria**
- Patients suffering from DM & HTN, HIV,
- HbSAg,
- Gangrenous wound,
- Chronic nonhealing. ulcers.

Clinical Study
Total 60 patient were selected of dushtavrana and clinical trial werw conducted in two groups each containing 30 patients of dushta vrana.

Group A i.e trial group were treated by application of saptaparnipatra kwatha.
Group B i.e control group were treated by application of betadine solution.

Dose :- As required on seeing wound size.

Place of study Opd and Ipd of Shlyatantra department.

Duration of study – 14 days.

**Gradation parameters**
1. **Varna (Colour)**
   - Healthy granulation tissue -0
   - White grey slough -1
   - Non adherent yellow slough -2
   - Adherent black slough -3

2. **Strava (Discharge)**
   - Absent -0
   - Serous -1
   - Serb-purulent -2
   - Frank -purulent -3

**Statistical analysis**
1) **Vrana (colour)unpaired t test within the Groupof 30 patient**
Table 6.2.6. Paired t test within the Group A and Group B
Group A
As value of p is far less than 0.001 extremely significant difference was observed between mean of BT and AT score in Vrana (colour). Hence it is concluded that Saptaparni patra kwatha highly effective to reduce Vrana (colour) in Dushta Vrana.

Group B
As value of p is far less than 0.001 extremely significant differences was observed between mean of BT and AT score in Vrana (colour). Hence it is concluded that Betadine solution is highly effective to reduce Vrana (colour) in Dushta Vrana.

Strava (discharge)
Paired t test within the Group A and Group B

<table>
<thead>
<tr>
<th>Group</th>
<th>BT/AT</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SE Mean</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>BT</td>
<td>30</td>
<td>2.667</td>
<td>0.479</td>
<td>0.0875</td>
<td>19.386</td>
<td>P&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>AT</td>
<td>30</td>
<td>0.300</td>
<td>0.466</td>
<td>0.0851</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group B</td>
<td>BT</td>
<td>30</td>
<td>2.500</td>
<td>0.509</td>
<td>0.0928</td>
<td>13.771</td>
<td>P&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>AT</td>
<td>30</td>
<td>0.467</td>
<td>0.507</td>
<td>0.0926</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As value of p is far less than 0.001 extremely significant difference was observed between mean of BT and AT score in Strava (discharge). Hence it is concluded that Saptaparni patra kwatha highly effective to reduce Strava (discharge) in Dushta Vrana.

Group B
As value of p is far less than 0.001 extremely significant differences was observed between mean of BT and AT score in Strava (discharge). Hence it is concluded that Betadine solution is highly effective to reduce Strava (discharge) in Dushta Vrana.

Total Effect of therapy

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Improvement</th>
<th>No of Patients</th>
<th>Percenta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Good Improvement (75% - 100%)</td>
<td>27</td>
<td>90.00 %</td>
</tr>
<tr>
<td>2.</td>
<td>Moderate Improvement (50% - 75%)</td>
<td>03</td>
<td>10.00 %</td>
</tr>
<tr>
<td>3.</td>
<td>Mild Improvement (25% - 50%)</td>
<td>00</td>
<td>00.00 %</td>
</tr>
<tr>
<td>4.</td>
<td>Unchanged (No Improvement) (0% - 25%)</td>
<td>00</td>
<td>00.00 %</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>30</td>
<td>100%</td>
</tr>
</tbody>
</table>
Statistical Analysis in between the Group A and Group B Objective parameter

Vrana (colour)

Unpaired t Test in between the Group A and Group B

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SE</th>
<th>T value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>30</td>
<td>2.367</td>
<td>0.669</td>
<td>0.122</td>
<td>1.325</td>
<td>P&lt;0.001</td>
</tr>
<tr>
<td>Group B</td>
<td>30</td>
<td>2.033</td>
<td>0.809</td>
<td>0.148</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As value of p is far less than 0.001, extremely significant difference was observed between the mean of difference of Group A and Group B in Vrana (colour). Hence it is concluded that Saptaparni patra kwatha is more effective than Betadine solution is to reduce Vrana (colour) in Dushta Vrana.

Strava (discharge)

Unpaired t Test in between the Group A and Group B

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SE</th>
<th>T value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>30</td>
<td>2.133</td>
<td>0.681</td>
<td>0.124</td>
<td>1.558</td>
<td>P&lt;0.001</td>
</tr>
<tr>
<td>Group B</td>
<td>30</td>
<td>2.067</td>
<td>0.691</td>
<td>0.126</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As value of p is far less than 0.001, extremely significant difference was observed between the mean of difference of Group A and Group B in Strava (discharge). Hence it is concluded that Saptaparni patra kwatha is more effective than Betadine solution is to reduce Strava (discharge) in Dushta Vrana.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Symptoms (Group A) and objective criteria</th>
<th>B.T. Relief</th>
<th>A.T. Relief</th>
<th>% Relief</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Vrana (colour)</td>
<td>80</td>
<td>9</td>
<td>71</td>
</tr>
<tr>
<td>2</td>
<td>Strava (discharge)</td>
<td>73</td>
<td>9</td>
<td>64</td>
</tr>
</tbody>
</table>

In Vrana (colour) of 30 patients of Dushta Vrana before treatment score was 80 and it comes down to 9 after received treatment. Means relieved by 71 i.e. 88.75% relief for Vrana (colour) of Dushta Vrana by Saptaparni patra kwatha

In Strava (discharge) symptom of 30 patients of Dushta Vrana before treatment score was 73 and it comes down to 9 after received treatment. Means relieved by 64 i.e. 87.67 % relief for Strava (discharge) symptom of Dushta Vrana of by Saptaparni patra kwatha
In Vrana (colour) of 30 patients of Dushta Vrana before treatment score was 75 and it comes down to 14 after received treatment. Means relieved by 61. i.e. 81.33 % relief for Vrana (colour) of Dushta Vrana by Betadine solution

In Strava (discharge) of 30 patients of Dushta Vrana before treatment score was 77 and it comes down to 15 after received treatment. Means relieved by 62. i.e. 80.51 % relief for Strava (discharge) of Dushta Vrana of by Betadine solution.

**Observation and Results:**
The assessments and the observations were recorded on the day of follow up. It’s contains the tubular presentation of observation & its significance. The change in the parameter before and after the treatment was compared by applying Student unpaired t test. From the data the result was discussed.

**Discussion:**
In the Discussion part the points are discussed as follows, General observations, clinical observations, statistical analysis, total effect of therapy, probable mode of action of Saptaparni patra kwatha on Dushta Vrana, scope and limitations of this study.

**Conclusion:**
Without finding some conclusion on any study, it would not become successful in its aims and a scientific discussion on clinical study definitely gives rise to some fruitful conclusions.

Conclusions drawn from present work are as follows:
The total effect of therapy is evaluated by taking relief in percentage of each patient.
Vrana (colour) 88.75 % in Grp A and 81.33 % in Grp B,
Strava (discharge);87.67 % in Grp A and 80.51% in Grp B
In view of Observations and on the basis of results obtained, statistical analysis, we concluded that Saptaparni patra kwatha showing significant results in Dushta Vrana than betadine solution.

**REFERENCES**
- *Sushrut Samhita.*
- *Surgical Das.*
- *Sharandhar Samhita.*
- *Love and belly.*