Study: Ayurveda is an applied science and time tested health system with vast scope of trails to prove certain principles as well as therapeutic effects of medicines. In this study Attention is directed to discover an agent which will accelerate wound healing with less side effects. Aims: To study the vedanasthapan (analgesic) & (vranaropak) healing properties of Yashtimadhu siddha ghrita in sadyovrana with special reference to shastrakruta vrana (surgical wound). Objectives: 1.To reduces pain in sadyovrana [vedanasthapan]. 2. To keep the sadyovrana in shuddha awastha that is prevention from infection & accelerate wound healing. Material & Methods: The present study was conducted basically at 3 levels, 1. Conceptual study 2. Standardization& quality control of trial drug 3. Clinical study. Study Design: Single blind study with local application of Yashtimadhu ghruta was done in patients having sadyovrana. Total 50 patients were taken, divided in two groups Group A- 25 patients were treated of local application with Yashtimadhu siddhaghruta. Group B- 25 patients were treated of local application with Povidone Iodine oint. Observations and Results: We observed that local application of Yashtimadhusidha Ghrita provided less pain, less inflammation, varnya (giving proper color to skin like natural) & good healing (vranaropak) property. Fewer complications noted in present study. Keywords: surgical wound sadyo vrana, shastrakruta vrana, yashtimaddhusiddha ghruta, wound healing.

INTRODUCTION

SADYO VRANA is mostly occurring due to accidental injuries & shastrakrut (surgical wound). As we see in today’s world the number of major & minor injuries has increased.

(1) Sushruta Samhita has given superior position to vrana. Sutrasthan of this samhita shows description of the vrana in most of the chapters and Chikitsa Sthana begins with Chapter for Vrana.

(2) Shalyatantra explained very clearly that vrana is the most significant surgical entity, Surgery and wound go hand in hand; the wound may be due to some kind of trauma or it by the surgeon’s knife.

The aim of treating a wound is to either shorten the time required for healing or to

minimize the undesired consequences. There are many factors responsible to delay the healing process like dead tissues, insufficient blood supply, protein deficiency, diseases like diabetes mellitus, tuberculosis etc.

(3) In case of delayed healing. Many investigations and experiments have been carried out in medical science. Analgesics, antibiotics and antiseptics like Povidone iodine, Silver sulphadiazine etc. are in use for the treatment of wound. These treatment modalities still have their own limitations and side effects.

Sadyo Vrana is in Shuddha state for 7 days so; if these vrana are treated within 7 days their chances of getting infected are reduced.

(4) According to the ref. sutrashtan of Sushrut Samhita, in Shastrakruta vrana the pain management can be done by Yashtimadhu siddhaghruta, because of the Rasa virya & vipak of yashtimadhu6 are madhur sheeta madhur respectively due to above properties of Yashtimadhu siddhaghruta is used in sadyovrana. According to Ayurveda Ghruta is good yogavahi so it enhances the properties of Yashtimadhu in Sadyovrana chikitsa. The surgical incision also called as a Sadyovrana.

**AIM & OBJECTIVES**

The aim of the study is To study the vedanasthapan (analgesic) & (vranaropak) healing properties of Yashtimadhu siddha ghrita in sadyovrana with special reference to Shastrakrutha Vrana.

The objectives are
1. To reduce pain in sadyovrana [vedanasthapan].
2. To Keep the sadyovrana in shuddha awastha i.e. prevention from Infection & accelerate wound healing.

**MATERIAL & METHODS**

Materials & methodology used for the study is as follows,

The present study was conducted basically at 3 levels,

**Level I (Conceptual Study)**

a. Conceptual review of topic from Ayurvedic Samhita was done.

b. References of Vrana & description of yashtimadhu & goghrua were collected & compiled. Study of Wound from modern literature & internet was done with the latest update on the Wound.

**Level II (Standardization & quality control of drug)**

a) Collection of raw material of Yashtimadhu was done from the field.

b) Authentication of the Yashtimadhu was done at botany department, Pune University.

c) Standardization of Yashtimadhu, Goghrua & Yashtimadhu Ghruta was done at IDRL Pune.

**Level III (Clinical Study)**

**CLINICAL TRIALS:**

Type of study – Single Blind controlled comparative clinical study.

**Group A-** 25 patients were treated with L. A. with Yashtimadhu siddhaghruta.

**Group B-** 25 patients were treated with L. A. with Povidone Iodine Oint.

All patients were examined by Trividha, Ashtavidha, and dashavidha pariksha. All investigations were carried out to rule out any systemic disease. Only then all these patients were subjected to this clinical trial.
STUDY DESIGN

Single blind study with Yashtimadhu Ghruta was done in patients having Sadyovrana. Total 50 patients having Sadyovrana (Shastrakruta) were selected randomly irrespective of age, sex & religion from the OPD & IPD of Shalyatantra department of Ayurved and general hospital nigdi, Pune, according to inclusion & exclusion criteria.

1. Inclusion criteria—
Patients were selected with clean shastrakarma, shastrakruta vrana irrespective of age, sex, religion, & socio- economical class.

2. Exclusion criteria—
1. H.I.V. patients. 2. T.B. patients. 3. D.M. patients. 4. Anaemic patients. 5. Infective case

These patients were divided in two groups
Group A- 25 patients were treated with local application by Yashtimadhu siddha ghruta.

Group B- 25 patients were treated with local application by Povidone Iodine Ointment.

An informed written consent of all patients included in the study was taken after explaining the risk.

PREPARATION OF YASHTIMADHUSIDDHA GHRUTA:

Snehapak –
In present study Yashtimadhusiddha goghruta used. The Ghruta kalpana is one of the unique features of Ayurvedic chikitsa called as sneha kalpana9. Sharangadhara Sumhita explains the complete manufacturing process.

First one part of yashtimadhu kalkawas taken & 16 lit. water poured in that. Heat given slowly to the mixture upto the ¼ (means 4 lit) water remained which is called as kwath (decoction). Then the decoction (kwath) + yashtimadhu kalka & one litre cowghee mitted and heat given slowly (samagni) till the water part gets evaporated and only Yashtimadhusiddha ghruta was remained.

The end point / stage were decided on following tests.

Snehasiddhi – pariksha
1. Agni Pariksha –if siddha ghruta is sprinkled over agni (flame) it burns without creating any noise.
2. Fen pariksha (bubble) – Fenashanti i.e. formation of air bubbles in the boiling mixture of snehapaka stopped is the end of ghruta siddhi
3. Kalkavarti Pariksha – when the ghruta is fully siddha then the kalka dravya from the mixture is taken and rolled between two fingers. It acquires a cylindrical shape (varti) and is not broken into pieces.

4. Ishta (proper) gandha (odour), varna (colour) and rasa (taste) formation take place only after complete siddhi of the ghruta.

These ingredients are described in details in various samhita, Graanthas, Charak, Sushruta, Vagabhat, Sharangdhar, Raj Nighantu, Dhanwantari Nighantu, Yogaratnakar. In the later period the description is seen in vanauashadhi chandrodaya & Dr. Nadkarnis Indian Materia media, A.P.I. & Internet etc.

Povidone Iodine9 Ointment

Iodine- Iodine is probably the oldest and the most widely used of the antimicrobials. It is a powerful bactericidal agent and in addition also possesses high sporicidal, fungicidal, amoebicidal. Iodine routinely used for treatment of wounds and abrasions, possesses certain disadvantages. It stains the area of application, is irritating, painful and may delay healing of wounds.
Idophors are developed by complexing iodine with surfactants like nonionic detergents, quaternaries, and macromolecules. The detergents act as solubilizers and carriers. Idophors are non-irritating and non-staining, water miscible in all dilutions. They owe their germicidal property slowly. Idophors are developed by complexing iodine with surfactants like nonionic detergents, quaternaries, and macromolecules. The detergents act as solubilizers and carriers. Idophors are non-irritating and non-staining, water miscible in all dilutions. They owe their germicidal property slowly.

**PROCEDURE OF LOCAL APPLICATION**

1. Yashtimadhusiddhaghrutawas taken in stainless steel bowl & got heated on spirit lamp to warm yashtimadhusidhaghruta.
2. Vranakarma (dressing of incision wound) with yashtimadhu siddha grhuta was done on alternate day upto Sutra-nirharan (removal of stitches) of patients in Group A
3. Vranakarma (dressing of incision wound) with Povidone Iodine was done on alternate day upto Sutra-nirharan (removal of stitches) of patients in Group B

All the dressing material used i.e. gauze, cotton etc. was properly sterilized before using. Yashtimadhusidhaghruta was protected from contamination & was applied after autoclaving.

Treatment was given for one week & maximum upto two weeks [upto sutranirharan]. In patients showing considerable complications, the supportive treatment was started.

For major Shastrakarma (surgeries) like Appendectomy, Hernioplasty, Laparotomy-post-operative I/V fluids, Antibiotics & Analgesics given as per signs & symptoms.

During this period keen observations were made for Shula (pain), Araktata (redness), Strava (discharge), Vranasotha (edges of wound), and Sthanik Aushnya (local temperature), jwara (body temperature) were immediately noted down in case paper.

**Observations & Results**

The observations of the 50 cases selected according to inclusion criteria and assessed according to assessment criteria are presented over here in tabular and graphical form. Proper statistical analysis was done to prove the significance of observations.

**Criteria for distribution**

A) Subjective

<table>
<thead>
<tr>
<th>Observation</th>
<th>0</th>
<th>+</th>
<th>++</th>
<th>+++</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>Mild</td>
<td>Moderate</td>
<td>Severe</td>
<td></td>
</tr>
</tbody>
</table>

**Criteria for assessment of result**

A) Subjective


B) Objective 1. Cured 2. Uncured

**A) Subjective**

<table>
<thead>
<tr>
<th>Pain</th>
<th>0</th>
<th>+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>No pain</td>
<td>Pain can tolerate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strava (discharge)</th>
<th>Araktata</th>
<th>Vrana oshtha</th>
<th>Sthanik Aushnya</th>
<th>Jwara</th>
</tr>
</thead>
<tbody>
<tr>
<td>No discharge (strava)</td>
<td>Normal skin colour</td>
<td>Shyavarna-Shudha Awastha</td>
<td>No</td>
<td>98.6 F &amp; below</td>
</tr>
<tr>
<td>Lasika stra-redness</td>
<td>Inflamed</td>
<td>Yes</td>
<td>98.6 F</td>
<td></td>
</tr>
</tbody>
</table>
Pingale Manisha & Banarase Madhavi: Study Of Properties Of Yashtimadhusiddhaghruta In Sadyovranawith Special Reference To Shastrakruta Vrana (Surgical Wound)

Pain relieved with analgesic
Lasika ani rakta strava
Redness with increased local temp.

++

Pain not relieved with analgesic
Puya strava
Redness with fluctuation

+++ Pain relieved with analgesic

Objective criteria

1) Cured – Upasham -These are the patients in whom the vranas achieved the Rudhavastha in 7-8 days without showing any sign of conversion into Dushtavastha [i.e. without showing any sign & symptoms of infection].

2) Uncured –Anupsham- These are the patients in which the vranas showed signs and symptoms of Dushtavarna in 5-7 days so some additional measure for treating the infection had to be given for that.

A) Subjective Criteria

1. SHULA

<table>
<thead>
<tr>
<th>Gradation</th>
<th>Group A</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>D3</td>
</tr>
<tr>
<td>0.</td>
<td>4</td>
</tr>
<tr>
<td>+</td>
<td>21</td>
</tr>
<tr>
<td>++</td>
<td>0</td>
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<tr>
<td>+++</td>
<td>0</td>
</tr>
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</table>

2. ARAKTATA

<table>
<thead>
<tr>
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<th>Group A</th>
</tr>
</thead>
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<tr>
<td></td>
<td>D3</td>
</tr>
<tr>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>+</td>
<td>2</td>
</tr>
<tr>
<td>++</td>
<td>0</td>
</tr>
<tr>
<td>+++</td>
<td>0</td>
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3. STRAVA

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D3</td>
</tr>
<tr>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>+</td>
<td>7</td>
</tr>
<tr>
<td>++</td>
<td>0</td>
</tr>
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<td>0</td>
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### 4. STHANIK AUSHNYA:

<table>
<thead>
<tr>
<th>Gradation</th>
<th>Group A</th>
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<tbody>
<tr>
<td></td>
<td>D3</td>
</tr>
<tr>
<td>0.</td>
<td>25</td>
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### 5. VRANA OSHTHA:

<table>
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<tr>
<th>Gradation</th>
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<tr>
<td></td>
<td>D3</td>
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<tr>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>+</td>
<td>7</td>
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### 6. JWARA:

<table>
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<tr>
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<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>+</td>
<td>25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gradation</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D3</td>
</tr>
<tr>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>+</td>
<td>1</td>
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</table>

. Vranaropana
APPLICATION OF YASHTIMADHU GHRUTA IN

1. Diagnostic Laparotomy

DISCUSSION

Regarding mode of action of drug

Yashtimadhu Vranaropan- Yashtimadhu has Vedanasthapak property.
Vranaropak-Yashtimadhu has madhur Rasa, Guru & snigdha guna, it binds the epithelial cells i.e. Vranaropak property.
Varnya- No discoloration had been seen in any case among the selected patients.
Yashtimadhushi Ghruta also shows the varnya property. i.e. giving proper colour to skin like natural.

According to constituents-


Ghee- It is having Yogavahi property, which creates good medium for absorption transport and delivers of the Ayurvedic formulation to the proper areas of the body. According to kaiyadev Nighantu – Varnya, good for wounds antibacterial, yogavahi, strotovishodhan & vranashodhan & vrana- ropan. Ghee also contains vit A, D, E and K. Vit A&E are antioxidants and are helpful in preventing oxidation injury to the body Vit A keeps epithelial tissue of the body intact, which is very useful for wound healing.

CONCLUSION

- This study was found very useful in the management of Sadyovranoby simple effective preparation of Yashtimadhusidha Ghruta by an ancient approach.
Pingale Manisha & Banarase Madhavi: Study Of Properties Of Yashtimadhusiddhaghruta In Sadyovranawith Special Reference To Shastrakruta Vrana (Surgical Wound)

- Yashtimadhusidha Ghruta shown properties like Vedanasthapak [reduced pain], & Shothaghna [anti-inflammanty].
- Yashtimadhusidha Ghruta & povidone Iodine are equally effective in Ropan of Sadyovrana [Good wound healing property].
- Yashtimadhusidha Ghruta shown varnya Property. Discouleration of skin was not found in any case.

Present study proves that Yashtimadhusidha Ghruta has Vedanasthapak, Shothaghna, varnya, & Vranaropan properties.

REFERENCE


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