A study to evaluate the efficacy of Nirgundi (Vitex negundo Linn.) Patra Arka in the management of Post-Operative Fistulotomy Wound - A Case Report

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ABSTRACT

Fistulotomy is considered the standard treatment modality for fistula-in-ano and is the most widely performed procedure in an average of 55.6% of cases. A post-operative fistulotomy wound is a contaminated wound and is more prone to further contamination by faeces, which may lead to secondary infections or delayed wound healing. Management of these wounds have been a challenging task, due to their anatomical position and patient’s minimal resting period, hence delaying its healing. Thus, these wounds are co-related to Dushta Vrana in Ayurveda which requires Vrana Shodhana and Vrana Ropana for management. Nirgundi Patra Arka has shown promising results by the virtue of its Vrana Vishodhana, Vrana Ropana, Shoolahara and Kandughna property and is considered a novel approach for the same. Therefore, a patient aged 25 years/ male with a post-operative fistulotomy wound was subjected to dressing with Nirgundi Patra Arka twice a day for a period of 14 days. Complete healing of the wound was observed in 21 days and findings as per VAS score and Bates - Jensens criteria for wound assessment tool were documented.

Key words: Nirgundi Patra, Fistulotomy, Dushta Vrana, Vrana Shodhana, Vrana Ropana, Arka, Post- Op Fistulotomy Care

INTRODUCTION

Anal fistulotomy, the unroofing of the entire tract from the external to the internal opening and is considered as the standard treatment modality for fistula-in-ano.[¹] It is the most widely performed procedure in about an average of 55.6% cases.[²] Post-operative fistulotomy wound is a contaminated wound and is more prone to further contamination by faeces, which may lead to secondary infections or delayed wound healing. Management of these wounds have been a challenging task, due to their anatomical position and the patient’s minimal resting period, hence delaying its healing.[³] These wounds have been co-related to Dushta Vrana in Ayurveda. So, a drug possessing Vrana Vishodhana, Vrana Ropana, Shoolahara and Kandughna property is needed for the better management of the same.[⁴] Nirgundi (Vitex negundo Linn.) is a medicine widely used for the management of infected wounds. Nirgundi (Vitex negundo Linn.) leaf extract has a broad spectrum of anti- microbial activity.[⁷]

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CASE HISTORY

Patient information: Patient aged 25 years/ male adult with no co-morbidities approached the OPD with c/o fistulotomy wound.
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swelling over the peri-anal region associated with pus discharge since 1 month.

Clinical findings: On clinical evaluation, a low-level subcutaneous fistula with external opening at 6 o’clock position, distanced at approximately 2.5 cm from the anal verge was observed. On DRE - internal opening was palpable at 6 o’clock position in the lower 1/3rd of the anal canal.

MATERIALS AND METHODS

Materials Required

Nirgundi Patra Arka
Normal saline
Mosquito forceps
Sterile gauze
Sterile gloves
Micropore

Method of Preparation

▪ 1 part of Nirgundi Patra - is taken and soaked in 6 parts of water for 24 hours, followed by extraction of Arka with Classical Arka Preparation method at a temperature of 60° Celsius.

Procedure

▪ Post operative Fistulotomy wound will be cleaned with normal saline under aseptic precautions.

▪ Nirgundi Patra Arka soaked in sterile gauze piece will be placed over the wound and dressing will be done twice daily for 14 days.

Duration of Treatment: 14 Days

Therapeutic Intervention

Informed surgical consent was taken and pre-operative assessments were performed, which were within normal limits. Under local anesthesia, fistulotomy was performed. The wound was subjected to dressing twice daily with gauze soaked in Nirgundi Patra Arka for a period of 14 days. Assessment was done on Day 1, Day 7, Day 14 and Day 28 as per VAS Score[8] and Bates- Jensen criteria for wound assessment tool.[9]

RESULT

Complete wound healing was observed on Day 28, with no associated complications and minimal scarring.

▪ VAS Score grading reduced to 0 from 8.

▪ BJWAT grading was observed to reduce from 39 to 11.

Follow-up and Outcomes

Table 1: VAS Score for Pain Assessment.

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 7</th>
<th>Day 14</th>
<th>Day 28</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 2: BATES - JENSENS Criteria for Wound Assessment Tool

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 7</th>
<th>Day 14</th>
<th>Day 28</th>
</tr>
</thead>
<tbody>
<tr>
<td>39</td>
<td>23</td>
<td>17</td>
<td>11</td>
</tr>
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</table>
Discussion

Acharya Sushruta has quoted Vrana in an elaborate manner, from his keen observations. He has proposed Shashti (sixty) Upakramas for the management of Dushta Vrana.[5] Due to its susceptibility to fecal contamination and the potential for secondary infections that can cause delayed wound healing and recurrent fistulae, a post-operative fistulotomy wound can be considered a Dushta Vrana, thereby making Vrana Shodhana and Vrana Ropana necessary.[3,4]

Nirgundi (Vitex negundo Linn.) is a medicine widely used for the management of infected wounds. The pharmacognostic study of Nirgundi (Vitex negundo Linn.) shows the presence of phlobatannins, carbohydrates, tannins, glycosides, volatile oils, resins, balsams, flavonoids and saponins owing to its broad – spectrum of anti – microbial activity.[7]

Katu-Tikta Rasa of this drug helps in wound healing by its properties of Kledshoshana, Krimighna and Shodhana Karma. It has an anti-inflammatory & analgesic action due to its flavonoid content which is known to act through inhibition of prostaglandin biosynthesis and helps in strengthening the new generating vessels.[10]

Arka Kalpana is adopted as an alternative method here due to its longer shelf life, cost- effectiveness and lack of preservatives. Arka contains volatile active substances hence having a greater potency even in minimal doses, easy absorption and easy applicability.[11]

Faster wound contraction is expected due to the active principles present in it. It is also observed that Nirgundi Patra Arka has a pleasant odour and causes no mucosal burning sensation in the patients.

Lankadhipati Ravana mentioned about Arka preparation in detail in his book called Arka Prakasha. He included it under Panchavidha Kashaya Kalpana. He has mentioned indications of Nirgundi Arka in Krimiroga, Vrana and Kushtha and hence was chosen for this study.[12,13]

Conclusion

It was observed that Nirgundi Patra Arka due to its - Vrana Vishodhana, Vrana Ropana, Shoolahara and Kandughna property accelerated the process of wound healing of the post - operative fistulotomy wound. Furthermore, its established anti-microbial activity prevented the development of any secondary infections with no recurrence of fistulae. It was also observed that Nirgundi Patra Arka did not cause any skin irritation like - rashes, burning sensation, etc. and was both - easy to prepare and easy to apply. The Vedanahara action of Nirgundi is already well known but the usage of this Arka showed significant reduction in the post - operative pain which was assessed and documented as per VAS Scale, proving that Nirgundi also possesses Vrana Shodhana and Vrana Ropana property.

References

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