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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.^[3] Management of these wounds have been a challenging task, due to its anatomical position and the patient's minimal resting period, hence delaying its healing.^[4] 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.^[5,6] *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]

CASE HISTORY

Patient information: Patient aged 25 years/ male adult with no co-morbidities approached the OPD with c/o

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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 sub-cutaneous 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- Jensens criteria for wound assessment tool.^[9]



FIGURE 01 – FISTULOTOMY PERFORMED



FIGURE 02 – FISTULOTOMY WOUND



FIGURE 03 – NIRGUNDI ARKA SOAKED GAUZE PLACED OVER THE FISTULOTOMY WOUND



FIGURE 04 – NIRGUNDI ARKA PACKING DONE

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.

Day 1	Day 7	Day 14	Day 28
8	4	1	0

Table 2: BATES - JENSENS Criteria for Wound Assessment Tool

Day 1	Day 7	Day 14	Day 28
39	23	17	11

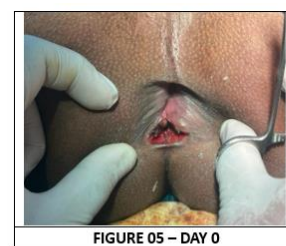


FIGURE 05 – DAY 0



FIGURE 06 – DAY 07



FIGURE 07- DAY 14



FIGURE 08- DAY 28

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.^[3,6]

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.

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