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APPLICATION OF HONEY AND GHEE DRESSING IN PYODERMA GANGRENOSUM: AN AYURVEDIC-INFORMED CASE OBSERVATION

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ABSTRACT

Background: Pyoderma gangrenosum (PG) is an uncommon, painful neutrophilic dermatosis that can lead to rapidly progressive ulceration. Its management is challenging because trauma may provoke pathergy, and local wound care must be coordinated with appropriate control of inflammation. Ayurvedic texts describe the use of Madhu (honey) and Ghrita (ghee) in Vrana Chikitsa. In this case, honey and ghee were used in a 1:1 ratio as a local wound dressing. **Objective:** To describe the use of honey-and-ghee dressing in a 1:1 ratio for ulcer healing in pyoderma gangrenosum, in relation to the Ayurvedic concept of Vrana Ropana. **Methods:** A patient presented with a non-healing ulcer. A skin biopsy was performed, and the histopathological findings were suggestive of pyoderma gangrenosum. An antibiotic course was administered to prevent or manage secondary bacterial infection. Subsequently, honey-and-ghee dressing in a 1:1 ratio was initiated to support wound healing. **Observation:** Honey-and-ghee dressing in a 1:1 ratio was performed regularly. Progressive healing of the ulcer was observed over approximately 3–4 weeks.

Conclusion: This case observation describes the use of honey-and-ghee dressing as supportive local wound care in pyoderma gangrenosum. The approach has a traditional Ayurvedic rationale based on the concepts of Vrana Shodhana and Vrana Ropana. Further clinical studies are required to establish its efficacy and safety.

KEYWORDS: Pyoderma gangrenosum; Madhu; Ghrita; Honey dressing; Ayurvedic wound care; Vrana Shodhana; Vrana Ropana; Pathergy.

1. INTRODUCTION

Pyoderma gangrenosum (PG) is a rare inflammatory ulcerative disorder classified among the neutrophilic dermatoses. The lesions may initially present as pustules or nodules and subsequently progress into painful ulcers with undermined, violaceous borders.

Pyoderma gangrenosum may be associated with inflammatory bowel disease, inflammatory arthritis, and haematological disorders, although it can also occur without any identifiable underlying systemic condition. The diagnosis is primarily clinical and requires consideration of other conditions, such as infections, vasculitis, vascular ulcers, and malignancies.

An important characteristic of pyoderma gangrenosum is pathergy, in which minor trauma, surgical procedures, or aggressive debridement may aggravate the ulcer or trigger new lesions. Management generally involves controlling the underlying inflammation through appropriate systemic or topical immunomodulatory treatment, depending on disease severity. Local wound care includes gentle cleansing, non-adherent dressings, pain management, and appropriate control of wound exudate.

In Ayurveda, wound management is described under the concept of Vrana Chikitsa. Acharya Sushruta has elaborated on various wound-management procedures under Shashti Upakrama, which include measures for Vrana Shodhana and Vrana Ropana. Madhu (honey) is traditionally described as having wound-cleansing and wound-healing properties. Acharya Charaka also describes the use of Madhu and Sarpi (Ghrita) in wound management.

These classical references provide a traditional Ayurvedic rationale for exploring honey-and-ghee dressing as supportive local wound care.

2. Ayurvedic Conceptual Basis

A. According to Acharya Charaka

Charaka Samhita, Chikitsa Sthana, Chapter 25 (Dvivraniya Chikitsa), describes the use of Madhu and Sarpi in wound management.

Reference: Charaka Samhita, Chikitsa Sthana 25/65.

This reference describes the application of Madhu and Sarpi to wound tissue as part of traditional wound management.

B. According to Acharya Sushruta

Acharya Sushruta has described the importance of Madhu in Vrana Chikitsa. Madhu is traditionally attributed with the following properties:

- Vrana Shodhana – Wound cleansing.
- Vrana Ropana – Wound healing.
- Sandhana – Supporting tissue union.
- Lekhana – Scraping action.

The use of Madhu and Sarpi is also described in Sushruta Samhita, Chikitsa Sthana, Chapter 1 (Dvivraniya Chikitsa).

Pyoderma gangrenosum is a modern clinical diagnosis and should not be considered directly equivalent to Dushta Vrana. The Ayurvedic concepts of Vrana Shodhana and Vrana Ropana are used here as a traditional conceptual framework for discussing local wound care.

3. MATERIALS AND METHODS

A. Materials Used

1. Honey (Madhu).
2. Ghee (Ghrita).
3. Sterile gauze.
4. Bandage.
5. Normal saline for wound cleansing.

B. Preparation

Honey and ghee were mixed thoroughly in an equal proportion (1:1) to obtain a uniform mixture for topical application.

C. Procedure

1. The ulcer was gently cleansed with normal saline under aseptic precautions.
2. Honey and ghee were mixed in a 1:1 ratio.
3. A thin layer of the prepared mixture was applied over the ulcer.
4. The wound was covered with sterile gauze.
5. The dressing was secured with a bandage.

D. Dressing Schedule

All dressing procedures were performed under aseptic precautions.

- During the first week, dressing was performed three times.
- Subsequently, daily dressing was continued for approximately 3–4 weeks.
- The wound was regularly assessed for changes in size, discharge, surrounding inflammation, and signs of healing.

4. Outcomes and Observations

Progressive healing of the ulcer was observed following the initiation of honey-and-ghee dressing.

Improvement in the wound condition was noted over approximately 2–3 weeks, with further healing observed during the subsequent follow-up period of 3–4 weeks.

The observations were based on the clinical assessment of the ulcer during follow-up.

5. Clinical Photographs



Figure 1: Clinical photographs of pyoderma gangrenosum before and after honey-and-

ghee dressing.

6. DISCUSSION

A. Potential Rationale for Honey (Madhu)

Medical-grade honey has been investigated for its potential role in wound management. Its proposed mechanisms include:

- Osmotic activity that may help reduce wound exudate.
- An acidic environment that may support wound healing.
- Antimicrobial activity against certain microorganisms.
- Potential support for wound-bed preparation and tissue healing.

However, evidence obtained from other wound types cannot automatically be extrapolated to pyoderma gangrenosum.

B. Potential Rationale for Ghee (Ghrita)

Ghrita has an established place in traditional Ayurvedic wound-care formulations. It is traditionally associated with Snigdha and Sheeta properties and is used in various formulations for local wound management.

However, robust clinical evidence supporting the use of plain ghee in pyoderma gangrenosum is currently lacking.

C. Clinical Considerations in Pyoderma Gangrenosum

Wound management in pyoderma gangrenosum requires particular care because of the risk of pathergy. The following precautions are important:

1. Wound cleansing should be gentle and atraumatic.
2. Routine sharp debridement should be avoided unless specifically indicated by the treating specialist.
3. Dressing materials should be selected according to wound exudate and surrounding skin condition.
4. Appropriate treatment to control the underlying inflammation should be continued.
5. Antibiotics should be administered when secondary bacterial infection is suspected or confirmed.
6. Regular follow-up and monitoring are essential to assess wound healing and identify complications.

Honey-and-ghee dressing, if considered, should be used only as an adjunctive wound-care approach under the supervision of dermatology and wound-care specialists.

7. CONCLUSION

The traditional Ayurvedic use of Madhu and Ghrita in Vrana Chikitsa provides a historical and conceptual rationale for exploring honey-and-ghee dressing as a supportive approach to local wound care.

In this case observation, progressive ulcer healing was noted following the application of honey-and-ghee dressing in a 1:1 ratio over a period of approximately 3–4 weeks.

This observation highlights the potential role of traditional Ayurvedic wound-care principles in supportive clinical practice. However, a single case observation cannot establish treatment efficacy or prove a causal relationship. Further clinical studies are required to evaluate the safety and effectiveness of this approach in pyoderma gangrenosum.

8. REFERENCES

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