



EFFICACY OF FERACRYLUM IN THE MANAGEMENT OF EPISTAXIS: A CLINICAL STUDY

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ABSTRACT **Objective:** To evaluate the efficacy of feracrylum, a topical hemostatic agent, in controlling epistaxis and compare its effectiveness with conventional methods. **Methods:** A prospective clinical study was conducted on 100 patients presenting with anterior epistaxis. Patients were randomly divided into two groups: Group A received feracrylum-soaked cotton pledgets, and Group B received conventional anterior nasal packing. Hemostasis time, recurrence rate, patient comfort, and complications were evaluated. **Results:** Feracrylum significantly reduced the time to achieve hemostasis (mean 3.2 ± 1.1 minutes) compared to nasal packing (mean 7.5 ± 2.6 minutes, $p < 0.05$). Patient comfort was higher, and complications were fewer in the feracrylum group. **Conclusion:** Feracrylum is an effective, safe, and patient-friendly alternative for the management of anterior epistaxis.

KEYWORDS : Feracrylum, epistaxis, topical hemostatic agent, nasal bleeding, anterior nasal packing

INTRODUCTION

Epistaxis, or nasal bleeding, is a common clinical emergency encountered in otorhinolaryngology. While most cases are anterior and self-limiting, some require active intervention. Traditionally, anterior nasal packing has been the mainstay of treatment; however, it is often associated with discomfort and complications [3]. Feracrylum, a polyacrylic acid derivative, has shown promising hemostatic properties in surgical settings. It works by activating thrombin and fibrinogen, promoting clot formation and facilitating wound healing [1,2]. Despite its established use in surgery, its application in epistaxis remains underexplored. This study aims to investigate the clinical efficacy and safety of feracrylum in the management of anterior epistaxis.

OBJECTIVE

To evaluate the efficacy of feracrylum, a topical hemostatic agent, in controlling epistaxis and compare its effectiveness with conventional methods.

MATERIALS AND METHODS

Study Design: A prospective, randomized, comparative study was conducted over a period of six months at a tertiary care center.

Participants: A total of 100 patients aged 18–65 years presenting with anterior epistaxis were included. Exclusion criteria included posterior epistaxis, bleeding disorders, and anticoagulant use.

Methodology: Participants were randomly assigned into: Group A (n=50): Treated with feracrylum 1% soaked in cotton pledgets.

Group B (n=50): Treated with standard anterior nasal packing using lignocaine and adrenaline-soaked gauze.

Hemostasis time, patient-reported comfort (using a 10-point Visual Analog Scale), recurrence within 48 hours, and any complications were documented.

Statistical Analysis:

Data were analyzed using SPSS v26. Independent t-tests and chi-square tests were used for comparison. A p -value < 0.05 was considered statistically significant.

RESULTS

- Hemostasis Time: Group A (feracrylum) achieved hemostasis significantly faster (3.2 ± 1.1 min) than Group B (7.5 ± 2.6 min) ($p < 0.001$).

- Patient Comfort: Mean comfort score was higher in Group A (8.4 ± 1.2) than Group B (5.6 ± 1.8) ($p < 0.01$).

-Recurrence Rate: Group A had fewer recurrences (8%) compared to Group B (18%) ($p = 0.04$).

-Complications: Minor complications (e.g., mucosal abrasions, headache) were less frequent in the feracrylum group.

Table 1: Comparative Outcomes Between Feracrylum And Nasal Packing Groups

Parameter	Group A (Feracrylum)	Group B (Nasal Packing)	p-value
Mean Time to Hemostasis (min)	3.2 ± 1.1	7.5 ± 2.6	< 0.001
Patient Comfort (VAS score)	8.4 ± 1.2	5.6 ± 1.8	< 0.01
Recurrence Rate (%)	8%	18%	0.04
Complication Rate (%)	4%	14%	0.03

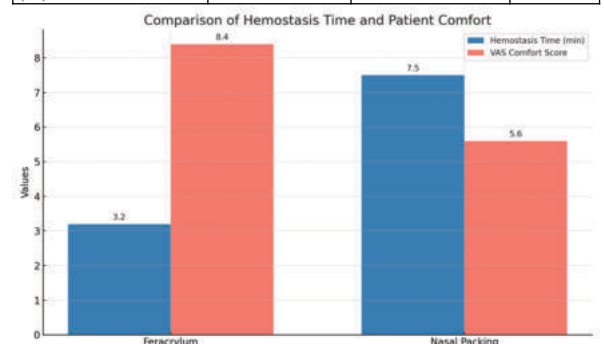


Figure 1: Comparison of Mean Hemostasis Time and Patient Comfort Score

DISCUSSION

Feracrylum has emerged as a promising topical hemostatic agent with broad applicability in various surgical and trauma settings [1,2]. In our study, its use in anterior epistaxis resulted in significantly reduced hemostasis time, improved patient comfort, and fewer complications when compared to traditional anterior nasal packing[3]. The hemostatic action of feracrylum is attributed to its polymeric structure that promotes clot formation by stabilizing the fibrin matrix

and activating coagulation pathways [1]. Moreover, its bacteriostatic properties reduce the risk of secondary infection, a known complication with conventional nasal packing [2]. Patient comfort is a major concern in epistaxis management. Conventional nasal packing often causes pain, nasal obstruction, mucosal abrasions, and in some cases, septal hematoma [3]. In our study, the Visual Analog Scale scores clearly indicated a higher comfort level with feracrylum application, possibly due to its minimally invasive application and absence of mechanical pressure on the nasal mucosa. Recurrence of bleeding within 48 hours was observed in both groups, though significantly less in the feracrylum group [1]. This can be attributed to better mucosal sealing and early healing facilitated by feracrylum. Similar findings have been reported in surgical literature, supporting its tissue regenerative potential [2].

Complication rates also favor feracrylum. Common issues such as mucosal trauma, infection, or vasovagal reactions are typically linked to traditional packing [3]. Our findings suggest that feracrylum's atraumatic application minimizes mucosal irritation and subsequent complications. Despite the favorable outcomes, a few limitations must be acknowledged. The study was limited to anterior epistaxis cases, with no evaluation in posterior bleeds or coagulopathic patients. Furthermore, long-term recurrence and cost-benefit analysis were not part of this study. A multi-centered trial with larger sample size and longer follow-up would be valuable to establish feracrylum as a first-line treatment option for epistaxis.

CONCLUSION

- Feracrylum is a fast-acting, efficient hemostatic agent for anterior epistaxis.
- It is associated with higher patient comfort and fewer complications.
- It can be considered a viable alternative to conventional nasal packing.

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