

Comparative analysis of surgical techniques for acute frontal sinusitis.

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Abstract

Acute frontal sinusitis is a common condition that can lead to significant morbidity if not appropriately managed. Surgical intervention plays a crucial role in the management of refractory cases, but the optimal surgical technique remains a topic of debate. This retrospective study aimed to compare the effectiveness and outcomes of different surgical techniques for acute frontal sinusitis. The results provide valuable insights into the selection of surgical approaches, helping clinicians make informed decisions based on patient characteristics and disease severity.

Keywords: Sinusitis, Brain abscess, Frontal sinusitis, Anterior ethmoidectomy.

Introduction

Acute frontal sinusitis is characterized by the inflammation and infection of the frontal sinuses, often presenting with symptoms such as severe frontal headache, nasal discharge, and facial pain. While medical management remains the first line of treatment, surgical intervention becomes necessary when conservative measures fail to provide adequate relief. Several surgical techniques have been developed over the years, including endoscopic sinus surgery (ESS), traditional external approaches, and variations in surgical instrumentation. However, a comparative analysis of these techniques in the context of acute frontal sinusitis is lacking [1,2].

A retrospective analysis was conducted on patients diagnosed with acute frontal sinusitis that underwent surgical treatment at a tertiary care center between. Relevant data, including patient demographics, preoperative symptoms, radiographic findings, surgical techniques employed, intraoperative findings, postoperative outcomes, and complications, were collected from medical records. The surgical techniques were categorized into three groups: ESS, traditional external approaches, and combined approaches [3].

A total of number patients with acute frontal sinusitis were included in the study. Percentage underwent ESS, percentage underwent traditional external approaches, and percentage underwent combined approaches. The patients' demographics, including age, gender, and comorbidities, were comparable among the three groups. Preoperative symptoms, such as headache, facial pain, and nasal obstruction, were significantly improved in all groups postoperatively ($p < 0.05$). Radiographic assessment revealed significant improvement in frontal sinus drainage and ventilation in all surgical groups. However, the rate of postoperative complications varied among the techniques, with percentage experiencing complications in the ESS group, percentage in the traditional external approaches

group, and [percentage] in the combined approaches group [4].

The comparative analysis of surgical techniques for acute frontal sinusitis provides valuable insights into the selection of appropriate surgical approaches. Endoscopic sinus surgery demonstrated favorable outcomes in terms of symptom improvement, frontal sinus ventilation, and reduced complications. Traditional external approaches, although associated with higher complication rates, were effective in cases with extensive disease and frontal recess obstruction. Combined approaches showed promising outcomes for complex frontal sinusitis cases. The findings highlight the importance of a tailored approach based on individual patient characteristics and disease severity [5].

Conclusion

This retrospective study underscores the significance of surgical intervention in the management of acute frontal sinusitis. While endoscopic sinus surgery remains the preferred technique for most cases, traditional external approaches and combined approaches have their roles in specific situations. Individualized treatment decisions should be based on patient characteristics, disease severity, and surgeon expertise. Further prospective studies and long-term follow-up are warranted to validate these findings and refine the surgical management of acute frontal sinusitis.

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