ABSTRACT

Background: Skull base osteomyelitis (SBO) is a rare and serious condition affecting the temporal bone as a complication of malignant otitis externa (MOE) in elderly, immunocompromised patients. While it is considered a rare condition, it is important as it can be challenging to diagnose and treat. The purpose of this study is to evaluate the outcome of surgical and medical management of SBO at our academic institution and to compare it to other reported series.

Methods: A retrospective chart review of patients with SBO who underwent surgical and medical management at our institution was performed. The patients included in this study were identified through a review of medical records. The inclusion criteria were patients with SBO who underwent surgical and medical management at our institution. The excluded criteria were patients who did not undergo surgical and medical management at our institution. The patients were divided into two groups: those who underwent surgery and those who did not.

Results: A total of 18 patients were included in the study. Of these, 14 patients underwent surgery and 4 patients did not. The patients who underwent surgery had a higher percentage of successful outcomes compared to those who did not. The most common surgical procedures were endonasal endoscopic surgery and transnasal endoscopic surgery. The most common medical management was long-term antimicrobial therapy.

Conclusion: SBO is a rare but serious condition. Our results suggest that surgical and medical management is effective in achieving successful outcomes. Further research is needed to refine the management of SBO.

INTRODUCTION

Skull base osteomyelitis (SBO) is a rare, infectious condition most commonly presenting in elderly and immunocompromised patients. SBO is a condition that affects the temporal bone as a complication of malignant otitis externa (MOE). The presence of SBO is often challenging to diagnose and can be difficult to treat. The purpose of this study is to evaluate the outcome of surgical and medical management of SBO at our institution and to compare it to other reported series.

METHODS AND MATERIALS

A retrospective chart review of patients with SBO who underwent surgical and medical management at our institution was performed. The patients included in this study were identified through a review of medical records. The inclusion criteria were patients with SBO who underwent surgical and medical management at our institution. The excluded criteria were patients who did not undergo surgical and medical management at our institution. The patients were divided into two groups: those who underwent surgery and those who did not.

RESULTS

A total of 18 patients were included in the study. Of these, 14 patients underwent surgery and 4 patients did not. The patients who underwent surgery had a higher percentage of successful outcomes compared to those who did not. The most common surgical procedures were endonasal endoscopic surgery and transnasal endoscopic surgery. The most common medical management was long-term antimicrobial therapy.

DISCUSSION

Central SBO is a challenging disease process that requires a multidisciplinary approach for optimal treatment. Our experience suggests that central SBO is a distinct disease process compared to lateral SBO. Nearly every patient in our study had imaging concerning for a nasopharyngeal or skull base tumor which represented a significant diagnostic challenge. MRI imaging is the accepted standard for both diagnosis and management of SBO. Typical findings include T2 contrast enhancement in the surrounding soft tissues (Figure A) with loss of marrow signal in T1 sequences indicating marrow involvement. In addition, T2 hyperintensity is often noted indicating an inflammatory process (Figure B). In the majority of cases, an erosive and infiltrative process was identified with enhancement of the soft tissue, clivus, sphenoid bone, or occiput.

CONCLUSION

SBO is a rare but serious condition. Our results suggest that surgical and medical management is effective in achieving successful outcomes. Further research is needed to refine the management of SBO.