INTRODUCTION

Maxillary odontogenic cysts have traditionally been treated using surgical approaches such as excision, curettage, and tooth extraction.1-3 These procedures require a transoral resection of the cyst walls, which can result in complications such as oroantral fistulas, chronic rhinosinusitis, and postoperative swelling.1,2 Endoscopic surgical techniques have been used to manage maxillary odontogenic cysts for over a decade.2-5 These procedures facilitate the removal of cyst walls and impacted teeth transnasally, which has been shown to result in less morbidity and a shorter recovery period.2-5

METHODS

Case series. Endoscopic sinus surgical techniques were used to treat large maxillary odontogenic cysts in five patients between June 2008 and October 2011. Patients underwent endoscopic marsupialization or resection of large maxillary odontogenic cysts in five patients.2-5 These procedures require a transoral incision and dissection of the cyst, which can result in complications such as oroantral fistulas, chronic rhinosinusitis, and postoperative swelling.1,2

RESULTS

A retrospective review was performed of patients treated with endoscopic surgical techniques for large maxillary odontogenic cysts.2-5 Patients presented with nasal obstruction, facial pressure, and swelling. The endonasal transmaxillary antrostomy was extended by resecting the mid portion of the inferior turbinate and removal of the medial maxillary sinus wall along the infraorbital floor. The impacted teeth were often displaced and removed transnasally. The unattached portion of the medial wall of the maxillary sinus was removed. Any small remnants of the cyst lining were removed. The roof of the cyst and its posterior extent were removed transnasally along with impacted teeth (Figure 5). The impacted teeth are often displaced into the sinus and can be dissected and extracted through the transnasal dissection (Figure 6). Post-operative views show healing of the maxillary sinus (Figure 6).

CONCLUSIONS

Benign maxillary odontogenic cysts can be effectively treated using transnasal endoscopic approaches. The techniques are less invasive and can reduce morbidity and complications compared to maxillectomy or transoral surgical techniques.1,2,3 The transnasal endoscopic approach outlined in this poster avoids the complications and morbidity of traditional procedures including oroantral fistulas, chronic maxillary sinusitis, loss of dentition and effects on maxillary bone growth and eruption of permanent teeth in children.1-4,5 This series describes the use of an endoscopic intranasal approach for the management of large maxillary odontogenic cysts with an aim to reduce these complications and morbidity. To illustrate the technique the preoperative CT images (Figure 1) and intraoperative endoscopic images of a patient are displayed below.

Surgical Technique

- Nasal endoscopy performed with 0 degree and 30 degree scope to evaluate middle meatus (Figure 2, 3)
- A wide maxillary antrostomy is performed with removal of the unattached portion of the uncinate process using a backbiter and microdebrider (Figure 3)
- The unattached portion of the maxillary sinus and its posterior extent are removed transnasally along with impacted teeth (Figure 5). The impacted teeth are often displaced into the sinus and can be dissected and extracted through the transnasal dissection (Figure 6).
- To access the inferior portion of the maxillary sinus the middle meatal maxillary antrostomy is extended by resecting the mid portion of the inferior turbinate and removal of the medial maxillary sinus wall along the infraorbital floor.
- A 70 degree diamond burr is used to drill down the ostial bone between the maxillary sinus and the cyst.
- Post-operative view showing healing maxillary mega-antrostomy. The sinus remains widely patent for post-operative surveillance (Figure 7).

REFERENCES