Restenosis of choanal atresia is a quite challenging for otolaryngologist. Avoidance of restenosis and associated morbidity is invaluable when considering revision surgery. Transnasal endoscopic removal of posterior vomer with powered instruments and postoperative stent is suitable for restenosis of bilateral choanal atresia after previous surgery with KTP laser.

Introduction

Revision surgery of choanal atresia brings challenges to the otolaryngologist, with higher failure rate and increase surgical hazards. We present our result of transnasal endoscopic treatment of bilateral choanal atresia in the premature infant.

Case report

A female infant born prematurely at 32 weeks gestation with a birth weight of 2.1Kg. She was treated in the incubation for symptoms of respiratory distress. Bilateral choanal atresia was first suspected at 2 weeks of life after failed to quit oxygen supply. A CT scan confirmed the diagnosis of choanal atresia. The following week, the patient underwent the first endoscopic endonasal atresia repair with KTP laser. Vaporization of the atretic plate and posterior septum was performed. At postoperative 3 weeks, respiratory distress was newly developed. After one-week's follow-up, we preformed reoperation. During reoperation, the cutting burr of the powered instrument and backbiting forceps were used to move the posterior part of the vomer, and postoperative stent was maintained for 2 weeks.

Results

There were no peri-operative complications. Frequent saline irrigations and suctioning of the stents was done to preserve their patency. During the 3-year follow-up, the operation site is well maintained without restenosis.

Preoperative endoscopic findings:
Complete obstruction was noted

Preoperative axial CT findings:
Complete bony type obstruction

3 weeks after 1st operation:
Restenosis was noted

2 weeks after 2nd operation:
stent was removed and maintained posterior choana