BACKGROUND

- Choanal atresia is a rare congenital disorder, the incidence of 1 case in 5000 - 8000 births with male and female ratio is 1:2.
- Unilateral choanal atresia does not immediately threaten the child’s life but it can cause unilateral chronic nasal drainage, while bilateral choanal atresia causes an emergency at the time of inadequate birth of the nasal airway.
- We reported three cases of different types of choanal atresia in our hospital from January 2017 – December 2018, which had been operated.

OBJECTIVE

This case was proposed to report the management of various types of choanal atresia in Kariadi Hospital Semarang

CASE

18 days female baby had refer from pediatricians with breathing disorder. This patient had sianotic congenital heart disease, but there were no other congenital disease. From physical examination there were an obstruction in both side nasal cavity. Paranasal CT scan shows a bilateral type of membranous choanal atresia. The transnasal choanoplasty was performed by mucosal incision on the right and left choana base. And 6 month after surgery patient has no complain about nasal breathing.

Figure 1. Unilateral membranous choanal atresia

18 years old female with complain right nasal obstruction since childhood. Patients often feel the presence of a clear, watery secrete of the right side nose every day. But she never felt difficulty in breathing. The nasal endoscopic shows mucoid discharge in posterior nasal cavity, with no sign of inflammation. Paranasal CT scan shows a unilateral type of bony and membranous choanal atresia in the right nasal cavity. The transnasal choanoplasty was done using drill and mucoperiosteal flap. 1 year evaluation after surgery shows a patent choana in both side and there were no nasal complain.

Figure 2. Unilateral bony and membranous type of choanal atresia

7 years old female with complain mucoid nasal discharge, nasal obstruction and mouth breathing. Endoscopic examination shows a bilateral obstruction in posterior part of inferior turbinate, with left nasal septal deviation. CT scan shows a bilateral bony and membranous type choanal atresia. We did transnasal choanoplasty using drill and posterior septectomy to widening the choana. After 6 month evaluation there were no complain about nasal discharge or breathing.

Figure 3. Bilateral bony and membranous type of choanal atresia

DISCUSSION

- The surgery technique for choanal atresia depends on age and anatomical characteristic. The are unilateral or bilateral, partial or complete, membranous, bone or mixed type.
- The factors that influence the success of the surgical outcome are age less than 10 days, gastroesophageal reflux disease, bilateral bony type of choanal atresia and associated malformation.
- The surgery technique for choanal atresia are: transpalatal, transanthral, transseptal and transnasal.
- The transnasal endoscopic choanoplasty is commonly use because effective and safe for bilateral or unilateral defects, with the successful rate 93%. This technique have some benefit such as direct approach to the atresia wall, minimal intraoperative bleeding, less surgery times and less morbidity.
- Posterior septectomy and mucoperiosteal flap can improves the choana patency.
- Postoperative stents has no benefit to improves the patency, stent may cause complication such as infection, longterm antibiotic and restenosis.

CONCLUSION

Choanal atresia can be late diagnosed especially if it occurs unilaterally. Several choanal atresia operating techniques according to the type of membrane or bone, for the membrane type using incision while the bone type needs to be made hole with a drill.