Objective: At the conclusion of this presentation, the participants should be able to describe and perform a new technique of closed reduction and stenting of neonatal septal dislocations.

Background: Mild neonatal septal deviations are a relatively common occurrence following intrauterine development and delivery; they often remain asymptomatic and require no intervention.2-4 Severe neonatal nasal deformities are much more rare with most reported incidences of 0.5-6.3%.3,4 The etiology for most cases of severe neonatal nasal deformity is due to birth trauma.2-5,12-14 There is not a consensus on proper treatment of neonatal nasal deformity. Some studies suggest that no treatment is necessary, and that the deformity will correct itself with time.2,6,7,11 Others believe early nasal and/or septal reduction is required to avoid persistent deformity and other complications.1,3,4,6,10,12-15 Severe septal dislocation from traumatic delivery resulting in inadequate nasal breathing, feeding difficulties, and respiratory distress is rare, but must be corrected immediately.2,5,6

Methods

Two patients presented to our Pediatric ENT department for evaluation after traumatic births. The first was a healthy male neonate born term to a primigravid with the delivery complicated by failure to progress. Following a failed traumatic delivery with subsequent cesarean section, it was evident that the neonate had a severe septal dislocation compromising nasal breathing and resulting in a profound external cosmetic deformity. The patient underwent closed reduction of the nasal septum on day of life 2 using a Feer elevator without anesthesia. The nasal septum was stented in the midline using two soft PVC nasopharyngeal airways, size 12 French (Teleflex Medical; Kamunting, Malaysia). The nasopharyngeal airways were trimmed to not extend beyond the posterior nasal cavity. The stents as well as the nasopharyngeal pyramid were secured in place using 1/4 inch Steri-strips. The patients were followed postoperatively with nasal packing for 4 days in the affected side (Figure 1). Following closed septal reduction and nasal stenting with the technique described, the patient has correction of the nasal septum and external deformity with restoration of nasal patency. The stent is depicted in Figure 2. Photographs depict a good cosmetic result with appropriate correction of the nasal dorsal and caudal septum at 4 months (Figure 3).

Patient 1: The neonate presented with immediate signs of septal dislocation following delivery. On day of life 2, the nasal dorsal has ecchymosis and edema, the nasal tip deviates to the right, the columella is oblique, the ala are asymmetric, and the caudal septum is obstructing the right nasal passage (Figure 1). Following closed septal reduction and nasal stenting with the technique described, the patient has correction of the nasal septum and external deformity with restoration of nasal patency. The stent is depicted in Figure 2. The patient underwent a closed septal reduction with silicone tubing on day of life 2 (Figure 3), followed by nasal stenting with silicone tubing on day of life 2 (Figure 3).

Patient 2: The neonate was noted to have a nasoseptal dislocation immediately following delivery. On day of life 3, the nasal tip deviates to the right, the columella is oblique, the left nasal ala is flattened, and the caudal septum deviates to the right with the base of the septum to the left of the nasal spine (Figure 4). After closed reduction, the septum, columella, and nasal tip are in proper anatomical position with near symmetry of the nasal ala (Figure 5).

Conclusions

Severe neonatal nasal deformities are relatively rare, and seem to represent a spectrum of pathology and severity. The literature would suggest that closed nasal and/or septal reduction improves long-term outcomes in most cases of severe neonatal nasal deformity.2-4,11-15 We present 2 cases of severe neonatal septal dislocation following traumatic delivery. The novel septal correction technique described is quick and easy, and uses readily accessible materials to correct the nasal deformity and maintain the airway.

References