Nasopharyngeal Airway for Management of Airway Obstruction in Infants With Micrognathia

Nooshin Parhizkar, M.D., Babette Saltzman, Ph.D., Kellyn Grote, Jacqueline Starr, Ph.D., Michael Cunningham, M.D., Ph.D., Jonathan Perkins, D.O., Kathleen Sie, M.D.

Objective: Describe airway management using nasopharyngeal airway in infants.


Setting: Tertiary pediatric hospital.

Patients, Participants: The craniofacial database of Seattle Children's Hospital was searched to identify patients with one of the following diagnoses: micrognathia, secondary cleft palate, branchial arch anomalies, Pierre Robin sequence (PRS), or velocardiofacial syndrome. Thirty-five (10.9%) of the 320 infants born between January 1, 1996, and March 31, 2006, identified using the criteria listed above were managed with nasopharyngeal airway (NPA) during infancy.

Interventions: Use of NPA.

Main Outcome Measure: Summary statistics describing the distribution of the infants' demographic characteristics, duration, and timing of their NPA placement, need for tracheotomy, feeding interventions, and death.

Results: Of the 35 patients included in this case series, 60% (21) were male. Eighteen (51.4%) patients had the diagnosis of PRS, 13 (37.1%) had secondary cleft palate and other craniofacial anomalies, and four (11.4%) had branchial arch anomalies and micrognathia (nonsyndromic or syndromic). Thirty-one children (88.6%) were managed with nasopharyngeal airway (NPA) during infancy.

Conclusions: NPA is one option in the management of patients with craniofacial anomalies and airway obstruction. The majority of nonsyndromic PRS patients treated with NPA during infancy did not require airway intervention beyond NPA.

KEY WORDS: airway management, nasopharyngeal airway, Pierre Robin sequence

Received: April 2010; Accepted: August 2010