Congenital Anomalies and Syndromes that are Predictors of Difficult Airway

Apert syndrome

Airway features Midface hypoplasia; possible choanal stenosis; progressive calcification of cervical spine

Crouzon syndrome

Midface hypoplasia; maxillary hypoplasia

Pfeiffer syndrome

Midface hypoplasia

Pierre Robin sequence

Micrognathia; glossoptosis (backward displacement of tongue); cleft palate

Goldenhar syndrome

Asymmetrical malar; maxillary and mandibulary hypoplasia; hemifacial microsomia

Treacher Collins syndrome

Bilateral malar and mandibular hypoplasia; airway obstruction at rest

Mucopolysaccaridoses (Hunter's and Hurler's syndrome)

Accumulation of mucopolysaccharides in various tissues, including airway; short, immobile neck; cervical instability

Beckwith-Wiedemann syndrome

Macroglossia

Down Syndrome

Obstructive sleep apnea, atlantoaxial instability, obesity, macroglossia, tonsillar/adenoidal hypertrophy, micrognathia, short neck, small trachea

Comorbidities or conditions that may be predictors of difficult airway

Rheumatoid Arthritis

This patient may have cervical spine involvement, TMJ synovitis, cricoarytenoid arthritis manifested by hoarseness, pericarditis, aortic regurgitation, pulmonary fibrosis, peripheral nerve compression, hepatitis, anemia, and drug-induced side-effects associated with aspirin and/or steroid therapy.

Morbid Obesity

Morbid obesity creates several factors that make intubation potentially difficult (short, muscular neck; inability to visualize uvula).

History of cervical spine surgery or fusion

These patients potentially have a significant decreased range of motion in their cervical spine making intubation difficult

History of sleep apnea

These patient may have redundant tissue in their hypopharynx that may make visualization of the glottic opening difficult or impossible