

Hemifacial microsomia: anatomical prediction of difficult intubation

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Summary

Hemifacial microsomia (HFM) is associated with a difficult airway. We hypothesized that a difficult intubation would be predicted by radiographic evaluation of the severity of mandibular hypoplasia. A retrospective review of anaesthetic and surgical records of 102 children with HFM from 1986 to 1996 was conducted for radiographic classification of mandibular hypoplasia and degree of difficulty with intubation. Intubation was classified as Grade A easy, Grade B difficult, or Grade C very difficult. The mandibular anatomy was categorized as Type I 'mini-mandible', Type II abnormal condylar size and shape, or Type III absent ramus, condyle, and temporomandibular joint. In the 82 patients with HFM, 70% were classified as Grade A, 21% had Grade B and 9% had Grade C airways. No patients with Type I mandible had Grade C airway, while 25% of the patients with Type III mandible had Grade C airway. The correlation of the degree of airway difficulty with mandibular type was significant ($P=0.001$). In 20 patients with bilateral mandibular hypoplasia, 30% had Grade A, 35% had Grade B, and 35% had Grade C airways. We conclude that radiographic classification of mandibular deformity is a useful adjunct for preoperative prediction of airway difficulty in the management of children with unilateral HFM.

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