LETTER TO EDITOR (VIEWERS CHOICE)

LARYNGEAL WEB MASQUERADING AS REFRACTORY BRONCHIAL ASTHMA

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An 8-years-old boy, born of second degree consanguineous marriage was referred to our hospital with complains of recurrent episodes of breathlessness and chest infection with cough for one year. The diagnosis of referring pediatrician was bronchial asthma. On examination, he had elongated face, prominent upper teeth, and hypoplastic maxilla and was an open mouth breather. He had an inspiratory stridor, prominent during sleep. He also had multiple episodes of night wakefulness, excessive daytime sleepiness and intermittent hypoxemia, clinically suggestive of obstructive sleep apnea. There was pre-axial polydactyly on the right hand. On chest auscultation, wheeze was present bilaterally. Cardiovascular, nasopharyngeal and other systems were normal. Patient was put on bronchodilator (nebulised and even oral/parenteral salbutamol/ terbutaline) and anti-inflammatory therapy, but his wheeze failed to respond. Investigations with chest X-ray, FEV1/FVC ratio, HRCT of chest, CT scan of paranasal sinuses and echocardiography were normal. Direct laryngoscopy revealed a laryngeal web between vocal folds near anterior commissure, obstructing about 60% of the lumen.

Laryngeal web is a rare anomaly, mostly congenital in origin with an incidence of 1 in 10,000 birth. (1) Although infrequent, laryngeal web can also be acquired by iatrogenic trauma (like intubations), infection (like tuberculosis) and chronic aspiration. (1) The embryonic phenomenon leading to its formation

occurs between the 7th - 8th weeks of gestation. (1) In this condition, the epithelial fusion between two sides of the larynx fails to dissolve resulting in incomplete recannalization of the laryngotracheal groove. (1) Seventy five percent of laryngeal webs occur at the level of the vocal cords and remainder are in subglottic or supraglottic location. (1) Laryngeal web may be asymptomatic or incidentally reported after failed intubation (due to web) during anesthesia. (1) Among symptomatic cases the symptom may range from mild dysphonia to significant airway obstruction, depending on the size (percent of glottic involvement), site (supraglottic, glottic or subglottic) and type (thick or thin) of the web. (1)

Laryngeal web may masquerade as bronchial asthma (2) as was seen in our patient. In such cases the refractoriness of asthmatic symptoms to bronchodilator and anti-inflammatory therapy and presence of signs of upper respiratory tract obstruction (as stridor) help to clinch the right diagnosis. Other upper respiratory tract disorders mimicking as bronchial asthma include tracheal webs, tracheomalacia, tracheal stenosis, leiomyoma of trachea and functional disorder of larynx. (2) Laryngeal web may also present with features of obstructive sleep apnea, as also seen in our case. (2) A third of the children with laryngeal web have associated anomalies of the respiratory tract most common subglottic stenosis. (2) Many cases of anterior glottic webs have been reported to be associated with deletion of chromosome 22q11, causing a wide range of phenotype like Di George syndrome, velocardiofacial syndrome or shprintzen syndrome. (3) A case of laryngeal web with polydactyly associated with Laurence Moon Beidl-Bardet syndrome is also reported. (4) Other associations noted are Simpson-Golabi-Behmel syndrome (5), tracheoesophageal fistula (6), ventricular septal defect (7), and VATER (8). Approximately 60% of patients require surgical intervention. The treatment of choice is externally performed laryngotracheal reconstruction with the rib cartilage graft and stenting. Now-a-days, endoscopic management by carbon dioxide laser transaction is also possible.

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