**PO26   SUPERIOR AIRWAY COLLAPSE: A RARE CAUSE OF STRIDOR**

Helena Barbosa(1); Marta Afonso(1); Joana Rebelo(1); Ana Isabel Pereira(1)

(1) Centro Hospitalar Vila Nova de Gaia/Espinho

**Introduction**: Acute inspiratory stridor and respiratory distress are worrying signs of central airway obstruction that should prompt immediate recognition and management. This report describes a case of stridor caused by aerodynamic supraglottic collapse and highlights the importance of a multidisciplinary approach in decision making regarding airway management.

**Case report**: We present a 54-year-old woman admitted in our emergency room with respiratory distress, stridor and facial edema (Fig.1). She had a personal history of arterial hypertension, dyslipidemia, obesity, nontreated severe obstructive sleep apnea and neuromyelitis optica spectrum disorder. Due to this last condition, she was taking prednisolone 20mg, azathioprine 100mg and baclofen 10mg daily.

The symptoms started after prednisolone intake and allergic reaction was suspected. After medical treatment, there were no clinical improvements and tracheostomy was considered, but fibroscopy ruled out airway edema. It showed a slight inflammation of arytenoid cartilages bilaterally that prolapsed antero-medially during inspiratory effort, reducing glottis opening and thus causing the stridor. Noninvasive ventilation (NIV) was then initiated and her respiratory distress diminished, as she did less inspiratory effort with less audible stridor and her respiratory rate gradually lowered. The patient was hospitalized under NIV and remained stable with no respiratory distress or respiratory acidosis. She was discharged home 2 days after with recommendations to do nocturnal NIV and reduce prednisolone and baclofen doses.

**Discussion**: Laryngomalacia can describe a form of acquired airway obstruction in adults caused by excessive or hypotense supraglottic tissue. 1,2 Therefore, it is an important entity to consider in patients presenting with respiratory distress.Fibroscopy evaluation is fundamental to assess supraglottic airway collapse and its neuromuscular or structural etiology, which determines its adequate treatment.3

The patient’s nontreated severe obstructive sleep apnea, use of baclofen and possible myopathy of the breathing muscles due to prolonged corticosteroid therapy were the likely causes of the aerodynamic superior airway collapse, as they are associated to hypotonia of supraglottal tissues.

**Summary**

Adult laryngomalacia is a very rare entity associated to superior airway collapse, causing stridor and respiratory distress. Fibroscopy is essential for its diagnosis and subsequent airway management.  Although a tracheostomy was considered in this patient, a careful evaluation and excellent multidisciplinary communication led to exclusion of acute airway obstruction. A conservative approach was followed and invasive procedures were avoided.

**References**

1. Gessler, EM, Eric JS and Greinwald Jr. "Adult laryngomalacia: an uncommon clinical entity." American journal of otolaryngology 23.6 (2002): 386-389.

2. Rutt, AL., Dworkin JP, and Stern N. "Supraglottic obstruction in an adult with inspiratory arytenoid cartilage prolapse." Otolaryngology 4.165 (2014): 2.

3. Kawamoto, Ai, et al. "Acquired idiopathic laryngomalacia treated by laser supraglottic laryngoplasty." The Tohoku Journal of Experimental Medicine 230.1 (2013): 43-47.