Cricoarytenoid Subluxation
Another Cause of Pseudoasthma

To the Editor:

In clinical practice, approximately 5% of patients initially given a diagnosis of asthma present poor symptom control despite appropriate treatment, and the diagnosis must be reassessed. This reappraisal may detect other diseases in up to 55% of cases, including diseases of the upper respiratory tract. This is the case of the patient we describe here.

The patient was a 57-year-old woman with a history of hypertension, dyslipidemia, rhinitis, intolerance of antiinflammatory drugs, and appendectomy at the age of 15 years. She was referred to the Pneumology Service with a diagnosis of difficult-to-treat asthma. The patient reported two or three dyspnea and cough attacks per year since the age of 15 years, requiring emergency consultation. The attacks were generally self-limiting and remitted within 24 h.

Although asymptomatic between episodes, at the time of the visit she was receiving treatment with fluticasone, 500 µg/12 h; formoterol, 50 µg/12 h; montelukast, 10 mg/24 h; tiotropium bromide, 18 µg/24 h; and salbutamol on request. The lung function study showed FVC, 3.20 L (93%); FEV₁, 2.67 L (102%); 83.5% FEV₁/FVC; total lung capacity, 4.65 L (94.9%); diffusing capacity of the lung for carbon monoxide, 6.27 L (73.8%); diffusing capacity of the lung for carbon monoxide/alveolar volume, 1.53 L (77.1%); a negative bronchodilator test; and a negative bronchial challenge test with methacholine. No atopy was demonstrated. A subsequent interview revealed that the symptoms began after an appendectomy that required endotracheal intubation for 3 days because of complications. With the suspicion of likely upper airway pathology secondary to intubation, a laryngeal stroboscopy was performed in which no laryngeal lesions were observed, except for a hyperlaxity of the cricoarytenoid joints and risk of vestibular stenosis during forced inspiration (Fig 1). With the diagnosis of cricoarytenoid subluxation after tracheal intubation, all bronchodilator medication was discontinued, and speech therapy was recommended. During the 4 years of follow-up, although the patient has presented similar clinical episodes, she has been able to control them using the techniques learned during speech therapy and has not needed to consult the emergency services.

Subluxation of the arytenoid cartilage is a rare condition that occurs as a complication of treatment of injuries to the larynx and neck. The diagnosis is made by laryngoscopy or videostroboscopy to evaluate the position and movement of the vocal cords, and the arytenoids are evaluated, as in this patient. The treatment of choice is direct, early reduction and repositioning of the arytenoid cartilage. An alternative is the application of Teflon or gelfoam via surgery in the area affected. In our case, because of the time elapsed and because the airway was obstructed only in forced inspiration, we decided to perform conservative treatment with speech exercises, as described elsewhere. On observing satisfactory progress, surgery was definitively ruled out.

To our knowledge, this is the first report of a case of bilateral cricoarytenoid subluxation of long duration.

![Figure 1: Laryngeal stroboscopy. A, Glottal closure during phonation. B, Maximum glottal opening during normal inspiration. C, In forced inspiration, a forward movement toward the midline (subluxation) of the arytenoid cartilages (arrows) is observed, which obstructs the entrance to the vestibule.](http://journal.publications.chestnet.org/pdfaccess.ashx?url=/data/journals/chest/931028/ on 06/26/2017)
that for many years was mistaken for difficult-to-treat asthma. We believe that this entity should be included in the differential diagnosis of the various disorders of the upper airways that can mimic asthma.

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References