

CLINICAL IMAGE

Almost complete airway occlusion due to an internal laryngocele

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A 77-year-old woman underwent orthopedic surgery in our hospital because of a proximal humerus fracture. She presented herself with a chronic obstructive pulmonary disease (COPD) as precondition which was not responsive to standard therapy (e.g. inhalative corticosteroids or beta-agonists) [1] and needed 4 L/min of oxygen over a nasal cannula to sustain an adequate peripheral oxygen-level ($SpO_2 > 90\%$). During her last hospital stay, the patient's COPD was classified as GOLD II type C (GOLD = Global Initiative for Chronic Obstructive Lung Disease) with an FEV1/FVC of 56% (FEV1 = forced expiration volume in 1 second, FVC = forced vital capacity).

For surgery, general anesthesia was performed requiring endotracheal intubation. During video-laryngoscopy, the patient showed what seemed to be an internal laryngocele which led to an almost complete airway obstruction (Figure 1). After securing the airway with a smaller endotracheal tube than anticipated, the surgery underwent uneventful and our patient was admitted to the intensive care unit for further surveillance.

Subsequently we informed the patient about our finding and the obstruction was surgically removed the next day. Histopathology ruled out malignancy and confirmed the diagnosis of an internal laryngocele.

Laryngoceles are extremely rare with an incidence of 1: 2.500.000 and five times more common in men than in women [2]. Although external laryngoceles become visible quickly, internal laryngoceles might be undetected for long periods and can rapidly cause obstructive symptoms with hoarseness and dyspnea. Risk factors for developing laryngoceles are high airway pressures e.g. due to excessive coughing or playing



Figure 1: Presentation of an internal laryngocele during video-laryngoscopy in the operating room.

wind instruments, with coughing owing to our patient's COPD being the most feasible explanation in this case [3]. Interestingly, we were able to discharge the patient without any additional oxygen-supply, leading to the assumption that the laryngocele was responsible for a great margin of the patient's COPD-symptoms.

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CONFLICT OF INTEREST STATEMENT

None declared.

ETHICAL APPROVAL

Not applicable.

CONSENT

Written informed consent about the publication of this article was obtained from the patient.

GUARANTOR

H.B.

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