

VOCAL PROCESS GRANULOMA: DIVERSITY IN PRESENTATION AND RESPONSE TO TREATMENT

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Introduction and aim: Vocal process granulomas (VPG) are benign lesions of the posterior glottis seen over the vocal processes of the arytenoid cartilages. In the past, three major etiologies of VPG have been identified, being laryngopharyngeal reflux, intubation and phonotrauma. Some cases however have shown to be multifactorial and therefore do not respond to one particular therapy. The aim of this paper is to discuss the variety of presentation and the often unpredictable course of treatment as seen in our own clinical practice.

Material and methods: This paper is a retrospective, multiple case description. The medical records of eight cases diagnosed with VPG between 2014 and 2017 were reviewed.

Results: Seven out of eight subjects were male. Patient follow-up time ranged from 8 to 25 months. Regarding possible causal factors, phonotraumatic behaviour was present in 7 cases. Two patients presented with a recent history of endotracheal intubation (one subject had a concomitant diagnosis of phonotrauma). Three patients had a positive history taking for gastro-oesophageal reflux disease (GERD). Clinical symptoms were sore throat and throat clearing in 7 patients, dysphonia and foreign body sensation in 6 cases. Seven VPG were unilateral, one case had bilateral VPG (which also had a positive recent history of intubation). Glottal insufficiency was diagnosed in 4 subjects, each of them was also treated with voice therapy. We performed a pharyngeal pH-metry in 4 out of the 8 cases. Only one of three patients with anamnestic symptoms of GERD showed also a positive pH-metry. All subjects initially underwent conservative management. They were all treated with antireflux therapy, consisting of lifestyle adjustments in 8 and proton pump inhibitors (PPI) in 7 cases. After the observation of a negative pH-metry in 3 cases, PPI were ceased. We restarted PPI in one of these 3 cases because of recurrence of complaints. Five subjects received voice therapy. Surgical removal was necessary in 4 patients, with recurrence in 2 of them. Finally the VPG resolved in 7 out of 8 cases, whereas the subjective complaints resolved in all subjects. Both recurrent cases after surgery resolved after repeated conservative treatment. Duration of therapy until disappearance ranged from 4 to 20 months.

Discussion: Causal factors in our patient population were laryngopharyngeal reflux, intubation and/or phonotrauma, as well as glottal insufficiency. Because VPG can have a multifactorial origin, exhaustive history taking is necessary to diagnose and therefore treat all the possible etiological factors. Pharyngeal pH-metry can be helpful in the diagnosis of GERD. As earlier described by Carroll et al. in 2009, underlying glottal insufficiency has been found in over half of the patients with vocal process granulomas. This corroborates with the findings of the present study (i.e., 4 out of 8 cases showed glottal insufficiency). Thorough logopedic examination should have a place in the diagnostic workup. Logopedic examination is especially recommended in patients with phonotraumatic behaviour and/or glottal insufficiency, or when there is no history of recent intubation and no obvious signs or symptoms of GERD can be detected. We found that the duration of therapy until disappearance of the VPG can strongly differ. In our cases, surgical excision with injection of local corticosteroids was performed when initial conservative treatment failed or when a malignant diagnosis could not be excluded. However, surgical excision remains controversial due to high recurrence rates postoperatively, reported in the literature by Ylitalo et al. up to 92%. Care should be taken to continue treatment of the underlying laryngeal irritation after surgery, in order to prevent recurrence.

Conclusion: Identification of the probable causal factors in VPG must be achieved by exhaustive history taking and clinical as well as logopedic examination. Laryngostroboscopic presentation, etiological factors and response to particular treatments can strongly differ between cases. Some VPG resolve fast when treated conservatively, while others prove to be more challenging in reaching the optimal treatment response.