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Letter to the Editor

Bamboo nodes as evidence of mixed connective tissue disease



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Bamboo nodes of the vocal cords were described for the first time by Hosako et al. in 1993 as transversal cream-yellow band lesions appearing on the upper surface of the vocal cords of a patient suffering from systemic lupus erythematosus (SLE) and were named as “bamboo-joint-like” [1]. Later, Murano et al. proposed a simplification of nomenclature with “bamboo node” [2]. These nodules cause dysphonia and are typically bilateral. They are almost exclusively associated with autoimmune diseases [1–4]. A 29 year-old woman, waitress, presenting an intermittent dysphonia of subacute onset, without previous similar episodes. The patient was examined at the Department of Otolaryngology. Pseudocystic lesions compatible with bamboo nodes were observed on both vocal cords (Fig. 1). The patient was referred to the Department of Rheumatology due to suspicion of an autoimmune disease. During anamnesis, the patient reported having suffered from Raynaud’s phenomenon for years. She also reported arthralgias accompanied by signs of inflammation in small joints of hands, without evidence of arthritis. Likewise, she suffered from intermittent canker sores. The physical examination was normal. Tests showed mild hypergammaglobulinemia, high levels for ANA (ANA 1/1280) and for anti-RNP antibodies. Rheumatoid factor and anti-citrullinated peptide antibodies, anti Ro, anti La and anti Sm were negative. Acute phase reactants (CRP and ESR) appeared in normal range. Chest x-ray was normal, and capillaroscopy showed minimal non-diagnostic changes. The patient was diagnosed with probable mixed connective tissue disease (MCTD) and treatment with prednisone 5 mg/day and hydroxychloroquine 200 mg/day started. Laryngeal affectionation is not uncommon in rheumatic diseases and dysphonia has been described as first symptom at initial manifestation for many autoimmune diseases [3,5]. In patients with rheumatoid arthritis (RA), Speyer et al. found a prevalence between 12–27% of dysphonia, and a relative risk between 3 and 4 when compared to healthy subjects [6]. The exact incidence of bamboo nodes is unknown, but during a selective search in patients suffering from autoimmune diseases, these lesions appeared in 80–100% of the examined subjects [7]. Bamboo nodes of the vocal cords have been

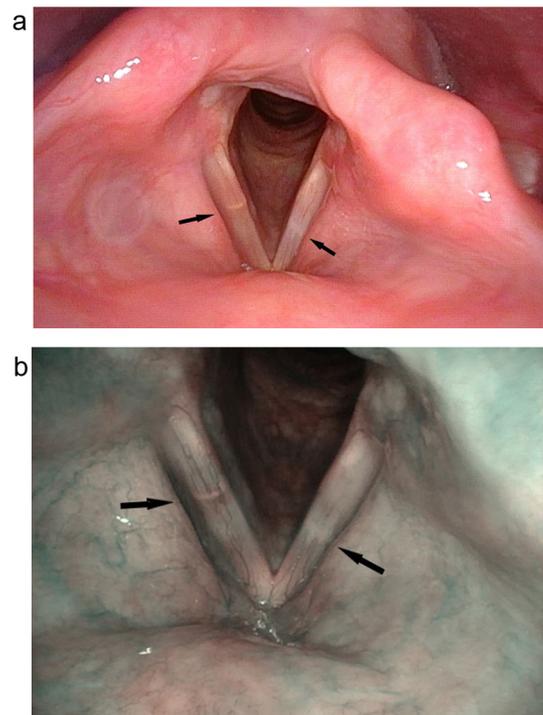


Fig. 1. a: Bamboo nodes. Bilateral submucosal yellow, transverse bands in the middle third of the vocal cords (arrows); b: longitudinal vessels of the vocal fold passing across the lesions, as striped (arrows).

described more frequently in patients with SLE and, they have also been associated with patients suffering from RA [5], MCTD [5], Sjögren’s syndrome [2], Hashimoto’s thyroiditis [1,8], and systemic sclerosis [1,8]. After literature review, eight published cases of MCTD [3–5,7,9,10] were found (Table 1). The pathophysiologic mechanism that causes these nodes is unknown, although it is believed that it may be similar to that of rheumatoid nodules: a mechanical factor (vocal overstrain) with an inflammatory base of the autoimmune disease [8]. Patients are typically women with professions requiring a great strain of the voice [2,4,5,8]. The therapeutic management is not clear. Hilgert proposes voice rest and speech therapy [5], Murano, voice rest and oral steroid treatment of first option [2], and Schwemmler, steroid injections [4]. With autoimmune disease, optimized immunosuppressive therapy must be a choice [8]. Surgery should only be performed for patients presenting incomplete improvement, or if the patient needs a rapid improvement of voice quality [2,4,6].

Table 1
Bamboo nodes in mixed connective tissue disease patient.

	Author, year	Sex/Age	Job	First symptom of MCTD	Treatment	Evolution
1	Perouse, 2001 [7]	F	NS	NS	Surgery	Improved
2	Ylitalo, 2003 [3]	F/ 16-60 years; mean 37	NS	NS	Voice therapy and 5 patients, surgery	NS
3	Ramos, 2005 [9]	F/36	NS	Yes	Oral steroid	NS
4		F/31	NS	Yes	Oral steroid	NS
5	Schwemmler, 2007 [10]	F/43	Teacher	Yes	Injection Steroid drugs (per a week), surgery and speech therapy	Improved
6	Hilgert, 2008 [5]	F/29	Telephone operator	Yes	Speech therapy	Improved
7		F/31	Telephone assistance	Yes	Speech therapy, voice rest and oral steroid	Improved
8	Schwemmler, 2013 [4]	F/43	Teacher	Yes	Injection Steroid drugs (four per a week), surgery and speech training	Improved

F: female; MCTD: mixed connective tissue diseases; NS: not specified.

Disclosure of interest

The authors declare that they have no competing interest.

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