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Case Report

UNUSUAL EXTERNAL AUDITORY CANAL RELAPSE IN PEMPHIGUS VULGARIS: A CASE REPORT

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INTRODUCTION

Pemphigus vulgaris (PV) is an autoimmune mucocutaneous blistering disease characterized by autoantibodies against desmogleins (DSGs), resulting clinically in the formation of blisters [1]. Histopathological analysis shows suprabasal acantholysis with loss of adhesion between adjacent keratinocytes with a tombstone aspect. Bullous lesions can involve different sites both on skin and mucosa such as oro-pharyngeal, laryngeal, nasal, conjunctival, genital, anal and esophageal mucosa. The frequency of ear, nose, and throat (ENT) involvement in PV is clearly highlighted in previous studies, but ear involvement has been only occasionally reported, characterized by pain and ear canal obstruction as reported first symptoms [2].

We present a peculiar case of a patient suffering from muco-cutaneous PV who, following a period of clinical and immunological remission, presented a relapse manifested only by auricular symptoms and signs that preceded the appearance of oral blisters.

CASE DESCRIPTION

In January 2014, a 47-year-old man was referred to the Oral Medicine Unit, Department of Neuroscience, Reproductive and Odontostomatological Sciences, Federico II University of Naples with blisters and erosions involving the skin of the face, neck and chest, the oral and nasal mucosa with bilateral conjunctivitis. The patient complained throat and nasal symptoms as pain, stinging, nasal obstruction and crusting. His general medical and dermatological history was negative. The patient underwent full ENT evaluation including otomicroscopy and endoscopic examination, that confirmed oral and nasal mucosa involvement.

He also underwent laboratory tests, including ELISA test to detect antibodies anti-DSG1 and anti-DSG3, instrumental examinations and incisional oral and skin biopsies with direct immunofluorescence (DIF). He was examined by means of routine hematological and infectious test and tumor markers. No alterations to these laboratory tests were detected. The initial anti-DSG 3 antibodies titer were >100 RU/ml and anti-DSG1 antibodies were negative as detected by ELISA test. Histopathology showed suprabasal acantholysis and intercellular deposits of immunoglobulin G (IgG), confirming the suspected diagnosis of PV. In absence of comorbidities, patient started conventional systemic therapy with corticosteroids (Deflazacort 120 mg/die) and Azathioprine (100mg/die) for 60 days without obtaining both clinical and immunological remission. The second step was the use of high-dose intravenous immunoglobulin (IVIg) (2gr/kg/cycle) with a clinical e immunological remission. The remission lasted 2 years, until right ear canal obstruction and pain appeared without hearing loss. Direct examination of the auricle and auditory canal of the ear showed erosions in auditory canal and serous otorrhea (Fig.1). Otoendoscopy with rigid 0° endoscope (Storz, diameter 2.7 mm, length 10 cm) confirmed the presence of ear involvement, that lasted 3

weeks after which the disease widespread involving face, neck, chest, conjunctival and oral mucosa. Anti-DSG 3 antibodies titer were 35 RU/ml and anti-DSG1 antibodies were negative detected by ELISA test. The muco-cutaneous relapse was treated with anti-CD-20 monoclonal antibodies (Rituximab) in association with IVIg in line with the protocol described by Ahmed et al [3] with a complete clinical and immunological remission (Fig 2). The patient is currently in six-monthly follow-up remaining in clinical and immunological remission off-therapy.

DISCUSSION

There are few data on ENT bullous manifestations, in fact at the early stage of illness ENT involvement may not be clearly diagnosed [4]. The frequency of ENT involvement has been described as: pharynx (38-85%), larynx (40-85%), nasal cavity (11-76%), ear (8-27%) [5]. Auricular findings in PV patients with otoendoscopic examination were confirmed and well-described in 10.5% [6], 19% [7], 26.5% [2] and 26.8% [8] of patients. The frequency of auricular involvement appears to be greater in the muco-cutaneous phenotype than in the mucosal phenotype [6]. The published symptoms associated with ear blistering lesions are earache, blockage of the external auditory canal and hearing loss, with a frequency rate of 25% [6], 26.5% [2] and 26.8% [8].

While nasal and pharyngeal lesions are in most cases symptomatic, the ear involvement is often asymptomatic and, therefore, in the absence of an otoscopic examination, ear blisters may not be detected and the diagnosis of auricular PV may be delayed or missed [6]. Few cases of ear blisters have been reported in the literature, but there is no indication of the exact anatomical area affected by bullous lesions; Fawzy [2] describes only external lesions and the only patient who described ear blocking on otoscopic examination showed an accumulation of ear wax, therefore the symptom was not related to the main pathology. Fernández et al. reported that the pinna (7,5%) and the most external part of the external auditory canal (7,5%) are the most affected sites [9].

Mahfoudhi et Khamassi described a case of auricular PV with erythematous and crusted lesions of the pretragic region and of the auricle with small lesions of the external auditory canal [10]. Therefore, in the reported cases the auricular lesions PV-related affect the peri-

auricular skin, instead in our case the PV relapse occurred with blistering and erosive lesions in the innermost part of the external auditory canal. This case is a rare report of PV patient, where the onset of the relapse is characterized by singular bullous lesion of the auricular canal without involvement of other mucosal and/or cutaneous sites.

The ear like the oral mucosa can represent the first manifestation of the disease or relapse and for this reason ENT specialist must make a careful assessment of the area in question in order to make an early diagnosis. An endoscopic otorhinolaryngologic examination must be performed at the first manifestation of bullous disease, regardless of the district involved and the phenotype, and subsequently in case of relapse of the disease and in the course of follow up.

CONCLUSION

The presence of bullous lesions can involve anatomical areas that are not always examined in routine clinical inspection such as the ENT district and, specifically, the ear. Therefore, the role of the ENT specialist is fundamental in the early diagnosis of PV and in the evaluation of the real disease extension.

Then, for a correct clinical evaluation at the onset and during the course of PV it is necessary to explore ENT mucosa and skin with endoscopy, not only when the patient reports symptoms but routinely in all PV patients.

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207 Legend of figures

208 **Fig 1:** Shows erosions in right auditory canal.

209 **Fig 2:** Shows complete resolution of auricular lesions following complete remission.