

Recurrent petrositis due to nasopharyngeal carcinoma in an adult patient: Gradenigo's syndrome

ABSTRACT

The early diagnosis of very rare nasopharyngeal carcinoma (NPC) is so difficult, to surrounded by structures such as the orbital skull base. With the invasion of the disease, the symptoms are manifested in different ways so that it may be confusion and delay in diagnosis and treatment in this situation. Including otological symptoms (serous otitis media), Gradenigo's syndrome is a rare clinical condition. The majority of published cases involve children, and the most common etiology is otitis media. We report a case of a diabetic man who presented with repeating Gradenigo's syndrome symptoms due to NPC.

KEY WORDS: Gradenigo's syndrome, mastoiditis, nasopharyngeal carcinoma

INTRODUCTION

Nasopharyngeal carcinoma (NPC) is different from other head and neck cancers in terms of anatomical localization. It has an insidious onset and nonspecific features in the early stage. The diagnosis and management of the disease may be a disturbance.^[1] Gradenigo's syndrome is defined as a clinical triad of otitis media, severe retro-orbital pain in the trigeminal nerve distributions, and ipsilateral sixth cranial palsy. The most common etiology of this syndrome is an infection.^[2] We reported a case that differs from these published reports: An NPC the etiology of Gradenigo's syndrome; the presence of recurrent symptoms of the syndrome persisted in a patient.

CASE REPORT

A 52-year-old man was admitted to neurology clinic due to the left postauricular and retrobulbar pain and diplopia as well as numbness on the trigeminal nerve distributions, which had lasted for 3 weeks. The neurological examination revealed the presence of paresis of the left sixth cranial nerve and hypoesthesia on the trigeminal nerve distributions of the ophthalmic and maxillary branch. In addition, a bilateral cornea reflex was present. The brain magnetic resonance imaging (MRI) scan was normal, but a computed

tomography investigation revealed petrous apicitis and mastoiditis in the left temporal bone. The patient was diagnosed with subacute otitis media and treated with medical antibiotherapy, after corticoid-therapy. Furthermore, mastoidectomy surgery was performed, and the patients' complaints were partially resolved. Two weeks later, he was admitted to the outpatient clinic again with the same complaints. A nasopharyngeal MRI [Figure 1] revealed large numbers of lymph nodes. After conducting multiple biopsies by flexible nasopharyngoscopic examination, the pathologic diagnosis was x [Figure 2]. Therefore, he was diagnosed as having Gradenigo's syndrome, resulting from NPC. The patient was immediately referred to the medical oncology department. The patient was evaluated as locally advanced stage NPC according to the American Joint Committee on Cancer 7.^[3] Three cycles of platinum-taxane containing induction chemotherapy regimen was administered, and after concurrent chemoradiotherapy (including platinum chemotherapy) was applied.^[1] The patient was observed without any medical treatment and complaint in follow-up.

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Figure 1: Nasopharyngeal magnetic resonance imaging: (a) Unilateral enlargement of lymph node in nasopharyngeal zone. (b) Bilateral enlargement of lymph nodes in nasopharyngeal zone

DISCUSSION

In 1904, Gradenigo described a triad of symptoms related to petrous apicitis, including acute suppurative otitis media, deep facial pain resulting from trigeminal involvement, and abducens nerve palsy.^[2] It is well-known that petrous apicitis is extremely rare; additionally, this complication of otitis media is life-threatening. In the literature, petrous apicitis is generally seen in pediatric age groups.^[4,5] According to these reports, the treatment of petrous apicitis is still controversial. Some authors suggest that conservative antibiotic therapy is effective.^[4,6] However, others revealed that a combination of surgical intervention, high dose intravenous antibiotics, systemic corticoid-therapy, and hyperbaric oxygen therapy are successful.^[7,8]

In this case, intravenous antibiotics and corticosteroid therapy were applied, and a mastoidectomy was performed. Despite aggressive treatment, his complaints resumed after 2 weeks. After multiple flexible nasopharyngoscopic examinations, nasopharyngeal keratinizing squamous cell carcinoma was diagnosed. In the literature, there is a few report about Gradenigo's syndrome due to NPC.^[6,9] In these reports, only Tutuncuoglu *et al.* reported a child with Gradenigo's syndrome that resulted from NPC.^[6] In published records, most adult patients with Gradenigo's syndrome recovered after conventional treatments. In the present case, despite aggressive treatment, symptoms of this syndrome repeated after a short period. In such cases, it should be kept in mind that may be a local invasion of any head and neck's carcinoma. Early diagnosis for NPC is very difficult, therefore, surrounded by structures such as the orbital skull base. The time between diagnosis and onset of the disease is usually long for NPC. This time is generally about 6–10 months. NPC are evolved mostly from Rosenmuller fossa and basis of nasopharyngeal wall. It may spread through neighborhood, and the most commonly posterolateral invasion to foramen lacerum, cavernous sinus.^[1] The incidence of the involvement of the nerves within the cavernous sinus is 12–35%.^[10] In conclusion, we may suggest that the presence of recurrent symptoms in adult cases may point to Gradenigo's syndrome, resulting from NPC. It is a rare clinical entity that must be kept in mind; there

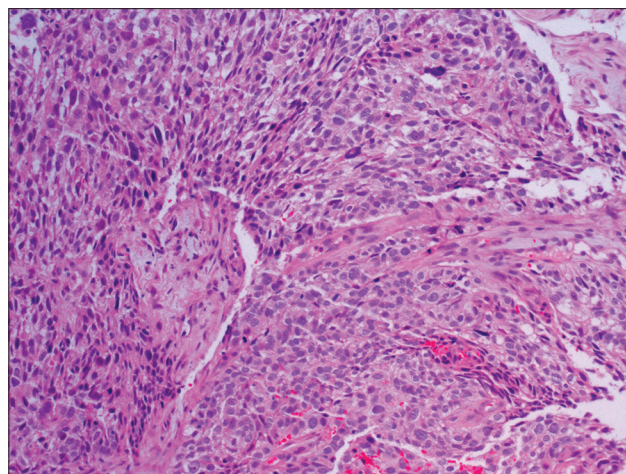


Figure 2: Tumoral lesion composed of solid sheets of squamous cells with pleomorphic vesicular nuclei, prominent nucleoli, and light eosinophilic cytoplasmic borders (H and E, ×100)

is need a multidisciplinary approach including neurologist, otolaryngologist, medical oncologists, and radiation oncologists.

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Conflicts of interest

There are no conflicts of interest.

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