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Case Report

A Case Report of Recurrent Episodes of Periorbital Cellulitis (RPOC) and Facial Inflammation on a Background Of 1E Nasal Extranodal NKT Cell Lymphoma in Remission

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Abstract

Recurrent periorbital cellulitis is a rare complication of sinus disease. To discuss the cause and management of recurrent periorbital cellulitis (RPOC) in a 53-year-old male patient with a medical history of stage 1E nasal extra nodal NKT cell lymphoma in remission (hard palate mass and left nasal cavity involvement) treated in the past with chemoradiotherapy, consolidative therapy and multiple sinus surgeries. Although periorbital cellulitis is a commonly encountered and treatable condition, recurrent periorbital cellulitis is rare and may be challenging to manage [1-5]. In our experience, the causes of recurrence vary, but resolution in this case was achieved by identifying the underlying cause through continuous clinical reassessment and by appropriate medical or surgical management.

Keywords: Periorbital Cellulitis; Surgery; Recurrent Periorbital Cellulitis (RPOC)

Introduction

Periorbital cellulitis is a serious condition, which could lead to devastating complications if not adequately treated. Periorbital infection can lead to orbital cellulitis and abscess, which could result in loss of vision [1-3]. Most cases of periorbital cellulitis require inpatient admission and treatment with intravenous antibiotics. In addition, most cases of periorbital cellulitis are complications of rhinosinusitis. Extranodal nasal NK/T cell lymphoma (NKTCL) is a rare type of cancer [4,5]. The term extranodal is used because this form of lymphoma is found outside of the traditional lymph node groupings. It mainly affects men, and usually arises in the nose, paranasal sinuses (paranasal sinuses are cavities (spaces) or small tunnels, located around or near the nose), orbits or upper airway, and that can present with a nasal mass, nasal bleeding, nasal obstruction, a hole in the palate, and mid-facial and/or upper airway destructive lesions [6-9]. This case is very unusual in that the patient had 1E nasal extranodal NKT cell Lymphoma in remission, presented with recurrent episodes of periorbital and facial inflammation. The likely reason for his history of infection was radiotherapy following sino-nasal lymphoma, causing chronic frontal sinuses infection. Definitive treatment for this patient's condition required antibiotics and surgical intervention, revision FESS and modified Lothrup performed by the ENT team.

Case Report

A 53-year-old male presented to the emergency eye clinic with a history of recurrent episodes of progressive swelling around his right eye, treated with oral antibiotics. At the time of admission, he reported photophobia and a right-sided headache but denied diplopia, sinus tenderness, or oral pain. He was diagnosed with periorbital cellulitis and was admitted for intravenous antibiotics. The patient had had at least seven prior episodes of periorbital cellulitis of the right eye within the previous five months and had also had milder episodes of bilateral eyelid swelling which had resolved spontaneously. The patient's past medical history was significant for multiple medical problems, including stage 1E

nasal extra nodal NKT cell lymphoma (hard palate mass and left nasal cavity involvement) treated with chemoradiotherapy and consolidative therapy in March 2016 and multiple sinus surgeries. In August/September 2016 following progression of his disease treated with additional chemoradiotherapy, remained in remission since. On examination, the patient was afebrile and other vital signs were stable.

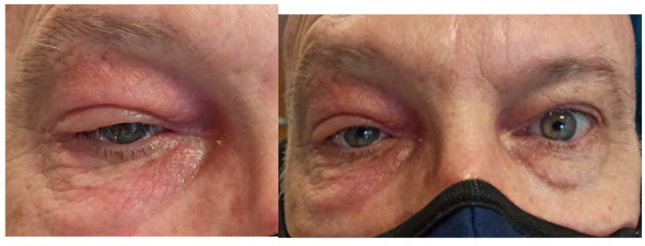

Figure 1

The patient had marked erythema and swelling around his right eye, particularly superiorly with marked tenderness over the area of his maxillary sinus (figure 1). His vision and extraocular movements were intact, and movements did not elicit pain. He reports getting thick nasal discharge regularly. On examination there are atrophic changes in his nasal mucosa secondary to the radiotherapy. Remainder of his physical exam was unremarkable. MRI/nasendoscopies and biopsies performed showed no recurrent tumour but likely post radiotherapy opacified and stenosed frontal sinuses bilaterally with a mucocele in the right supraorbital cell and osteosis of the drainage pathway of that particular cell, causing recurrent episodes of periorbital cellulitis (figure 2). Planned sinus drainage procedure following prior balloon sinus dilation procedure has been suggested.

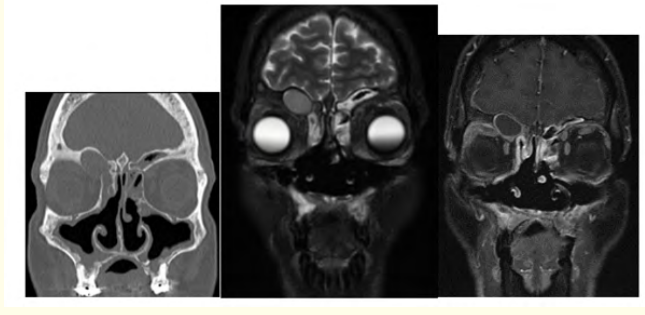

Figure 2

Recommended treatment

The following options on treatment have been discussed: 1. Conservative treatment with regular saline douches although, this kind of treatment is unable to prevent the continuous orbital infections. 2.Sinus surgery. Any form of surgery unfortunately doesn't guarantee prevention of orbital infections in the future as the patient has a high chance of scarring due to the radiotherapy which may affect the result of any surgery performed and result in reclosure of the sinus drainage pathways. The surgery can be in the form of regular endoscopic sinus surgery or a more extensive modified Lothrop procedure which includes making a wide opening of the frontal sinuses [10-14]. The patient had the modified Lothrop procedure, posterior part of the nasal septum completely taken down and the frontal sinus drainage pathways opened up into the nasal cavity. This created wide frontal sinusotomies. The patient remains asymptomatic 8 months postoperatively.

Conclusion

Although periorbital cellulitis is a commonly encountered and treatable condition, recurrent periorbital cellulitis is rare, should raise a suspicion for further investigation and may be challenging to manage. In our experience, the causes of recurrence vary, but resolution was achieved by identifying the underlying cause through continuous clinical reassessment and by appropriate medical and surgical management.

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