

Preseptal Cellulitis and Orbital Cellulitis: A 5-year Review of Patients seen at Federal Medical Centre, Abeokuta

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Introduction: Orbital cellulitis is a life threatening infection involving soft tissues of the orbit posterior to the orbital septum, while preseptal cellulitis involves soft tissues of the eyelids and periocular region anterior to the orbital septum. It occurs in any age group but mostly children^[1]. Sinusitis is the commonest cause of orbital cellulitis, while external ocular infection/trauma is the commonest for preseptal cellulitis. The common causative agent in preseptal is *Staph. aureus* while *Strept. pn.* in orbital cellulitis^[1]. Preseptal cellulitis and orbital cellulitis could be continuum particularly in children. In Chandler's classification of orbital complication of sinusitis, preseptal and orbital cellulitis fall into groups I and II respectively^[2].

Methods: Age, sex and aetiological factors of patients seen between January 2010 and December 2014 were carefully analysed.

Results: Of the 9,552 patients seen for different ocular conditions, 117 (1.22%) had preseptal cellulitis or orbital cellulitis, 85 (72.16%) had preseptal while 32 (27.35%) had orbital cellulitis. The age range was between 1 month and 50 years with mean age of 12.36 years while number of patients below 19 years was 92 (78.63%). Male (81) to female (36) ratio was 2.25:1 Approximately 43% of cases of orbital cellulitis were secondary to upper respiratory tract infections (Figure 1). Face and eyelid trauma was the cause in 47.4% of cases of preseptal cellulitis (Figure 2).

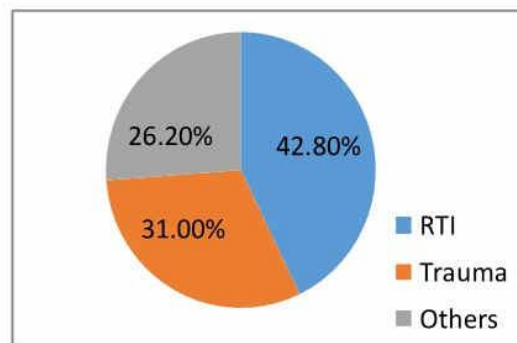


Fig. 1: Aetiological factors among patients orbital cellulitis

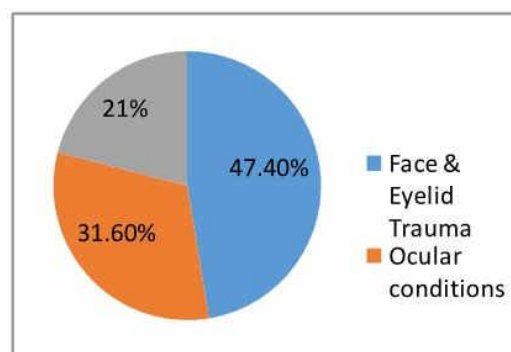


Fig. 2: Aetiological factors of patients with preseptal cellulitis

Discussion: Preseptal cellulitis (72.65%) was more frequent compared to orbital cellulitis (27.35%). This was also reported in studies by Balogun *et al.*, (LASUTH), Ambati *et al.*, Ting Li *et al.*, (Taiwan) and Bagheri *et al.*, (Iran)^[3,4,5,6]. The reason is because it is more common in children, patients also present early and it could be associated with trauma. There was a male preponderance for orbital cellulitis, unlike preseptal cellulitis that had no gender preference similar to studies by Balogun *et al.*, Nwaorgu *et al.*, Taiwo *et al.*, and Ting Li *et al.*, (Taiwan)^[3,4,7,8]. Preseptal and orbital cellulitis affects all age groups but more in children, 78.63% of the cases seen were below 19 years with a mean age of 12.36 years. Children are more prone to upper respiratory tract infections because of the anatomy of the respiratory tract^[3,7,8,7,9,10]. About 43% of orbital cellulitis resulted from upper respiratory tract infections (sinusitis) while 47.4% of preseptal cellulitis was secondary to face and eyelid

trauma^[3,5,11,12]. Preseptal and orbital cellulitis are important eye conditions that require prompt diagnosis and evaluation by an ophthalmologist. Improving community-based comprehensive education on the complications of sinusitis especially in children is paramount as it can aid early diagnosis and prompt treatment with proper antibiotics and/or surgical intervention will prevent potential morbidity and mortality.

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