

## Pattern of Presentation and Management of Orbital Cellulitis among Patients attending Prince Mutaib Bin Abdulazziz Hospital (PMH) Sakaka Aljouf Kingdom of Saudi Arabia

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**Introduction:** Infection in the orbital soft tissues, posterior to the orbital septum results in orbital cellulitis<sup>1</sup>. This is an ophthalmic emergency, which may occur as a complication of sinusitis by contiguous spread or may result from haematogenous spread or from trauma<sup>2</sup>. Orbital cellulitis presents with periorbital swelling, proptosis, conjunctival chemosis and injection, extraocular motility deficits and visual loss. It requires co-management by the ophthalmologist and ENT-surgeon when secondary to sinusitis<sup>3</sup>. This study was carried out to investigate the presentation and management of orbital cellulitis in Prince Mutaib Bin Abdullazziz Hospital Sakaka Aljouf Kingdom of Saudi Arabia.

**Methods:** A retrospective study of orbital cellulitis managed in Prince Mutaib Bin Abdulazziz Hospital of Aljouf Region was conducted among patients referred and admitted between 2017 and 2019. Orbital Cellulitis was diagnosed among 9 patients all within the pediatric age group (3 - 16) years. The clinical symptoms, signs, investigations performed and the approach of management were recorded into a proforma.

**Results:** Of the nine patients, eight had unilateral disease while one had bilateral orbital cellulitis. Two cases were secondary to trauma. Fever was present in six patients. Upper respiratory tract infection and features of sinusitis were present in four patients. There were no prior abdominal symptoms and signs among the patients. Eight patients had elevated white blood cell count above  $> 10,000 /\text{mm}^3$  and all nine patients had elevated erythrocyte sedimentation rate. Blood culture was

negative after 48hrs in all the patients with commencement of broad-spectrum parenteral antibiotic. Chest radiological features of resolving multiple small nodular or reticulonodular opacities was reported in five patients. Positive Computed Tomography (CT) Scan findings (Evidence of soft Tissue Inflammation) was observed in eight patients, especially ethmoidal sinusitis (Figure 1) among older children and maxillary sinusitis. CT-Scan with Cerebral Abscess was found in one patient (Figure 2). All cases had multidisciplinary approach to their management. Eight patients had full recovery with broad spectrum parenteral antibiotic treatment. One patient had surgical intervention of abscess drainage with subsequent full recovery.



**Figure 1:** Axial Computed Tomography scan of the brain and sinuses showing fluid opacification of the left maxillary antrum in keeping with sinusitis



**Figure 2:** Contrast enhanced Coronal view of the computed tomography scan of the brain: Features are consistent with a left parietal cerebral abscess. Note the opacified left maxillary sinus (sinusitis)

**Conclusion:** People with periorbital cellulitis experience a swelling of the eyelid in one eye. A 2020 article notes that it is more common in children than in adults<sup>4</sup>. In rare cases, the infection can cause complications<sup>5</sup>. However, most cases resolve after 5–7 days of taking antibiotics as discovered among all the studied patients<sup>6</sup>.

#### References

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