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Case Report

Idiopathic Orbital Inflammation in a Child After Mumps Infection: A Case Report

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Abstract

Introduction: Idiopathic orbital inflammation is rare among children. We report a case of myositic type of IOI in a child after Mumps infection.

Case Report: A 11 year-old girl presented to our hospital with a painful ptosis and swollen left eye. On examination, we found a left superior periorbital edema, temporal bulbar conjunctival injection and limited left abduction. A contrast enhanced computed tomographic (CT) scan of the orbits demonstrated an enlarged left lacrimal gland with involvement of the lateral rectus muscle and a superficial nodule of the parotid gland of 10 mm. The child was treated with a high dose of oral steroids. There was rapid clinical resolution.

Conclusion: IOI is not common in pediatric age group. Several conditions such as cellulitis and rhabdomyosarcoma should be considered in the differential diagnosis in children.

Keywords: *Idiopathic Orbital Inflammation; Child; Steroids; Myositis; Mumps*

Introduction

Idiopathic orbital inflammation (IOI) is an orbital disease with an idiopathic cause, spontaneous resolution, and non-granulomatous changes on histopathology [1].

Although well described among adults, IOI is a rare disease in childhood. There are only 70 case reports in the scientific literature [2].

We report a case of myositic type of IOI in a child after Mumps infection.

Case Report

A 11 year-old girl, with a history of febrile episode 7 days ago, presented to our hospital with a painful ptosis and swollen left eye since four days. On examination, we found a left superior periorbital edema (Figure 1), temporal bulbar conjunctival injection (Figure 2) and limited left abduction. Her visual acuity was 20/20 and fundus exam was normal on both eyes. A contrast enhanced computed tomographic (CT) scan of the orbits demonstrated an enlarged left lacrimal gland with involvement of the lateral rectus muscle and a superficial nodule of the parotid gland of 10 mm (Figure 3). Complete blood count, C-Reactive protein and sedimentation rate were in normal ranges. Intra-Dermo-reaction, anti-nuclear and anti-neutrophil Cytoplasmic antibodies were negative. The otolaryngology examination did not show any sinusitis. A preliminary diagnosis of IOI was made, although it is rare in a child. The child was treated with a high dose of oral steroids (1 mg/kg/day). There was rapid clinical resolution within 3 days, and the steroids were tapered over 6 weeks. Two weeks after initial treatment, she had full eye movement and no residual proptosis (Figure 4). At last follow up 3 months after presentation, the child remained asymptomatic without recurrence.

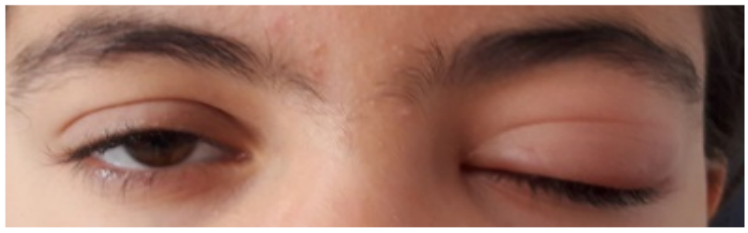

Figure 1: *A clinical photograph at presentation showing left upper eyelid edema and blepharoptosis.*

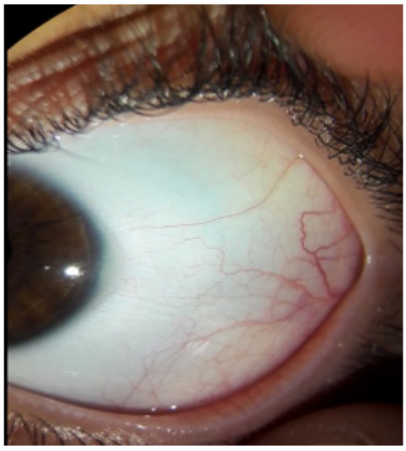

Figure 2: *Slit-lamp photography showing temporal conjunctival injection.*

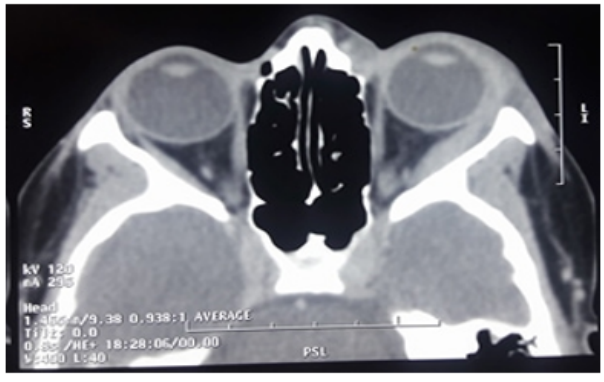

Figure 3: *Orbital CT scan showing enlargement of left lacrimal gland with involvement of the lateral rectus muscle.*

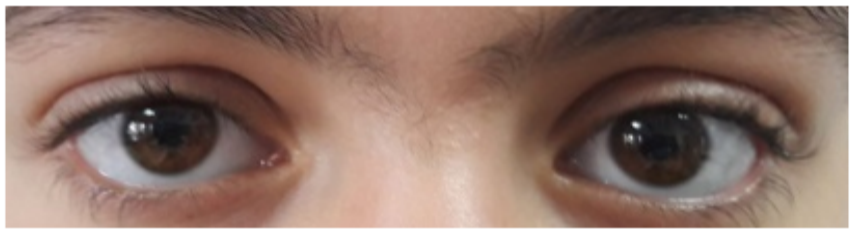

Figure 4: *Clinical photograph 2 weeks following the initiation of oral corticosteroids showing improved edema and ptosis.*

Discussion

IOI is extremely rare among children and may cause real diagnostic problem. Pediatric cases account for 11,5% of the total population of cases with IOI [3]. This disease can involve any of the orbital soft tissue. The rectus muscles (myositis) and the lacrimal gland (dacryoadenitis) are the most involved sites [4]. Similarly to adults, the medial and lateral rectus muscles are the most commonly affected extraocular muscles [5]. Although IOI is bilateral in 45% of pediatric cases, in general 90% of cases are unilateral as seen in our case [6]. Eyelid edema, proptosis, ocular motility restriction and high orbital pression are the most common presenting sign in pediatric population. Ptosis occurs more often in children than in adult cases [3]. Systemic signs such as headache, emesis, anorexis, abdominal pain and weight loss have been reported in 50% of pediatric cases [7]. These symptoms are rarely reported in adult patients. The etiology of IOI is unknown. Some theories have been described like autoimmune disorder, viral infection and aberrant wound healing [8]. In our case, IOI appear 7 days after mumps infection. This cause has never been reported in the literature. This disease is a diagnosis of exclusion. Some of the differential diagnosis include orbital cellulitis, rhabdomyosarcoma, leukemia, orbital foreign body, ruptured dermoid cyst, lymphangioma and thyroid related orbitopathy [9]. Systemic corticosteroid therapy is the cornerstone of managing IOI and improvement with corticosteroid therapy is of diagnostic significance. However, in the pediatric population, adverse effects may limit the long-term use of corticosteroids especially in case of recurrences. Immunosuppressive therapy and intravenous immunoglobulin may be an alternative in this population to prevent long term consequences [19].

Conclusion

IOI is not common in pediatric age group and extraocular muscle involvement by itself is rare. Several conditions such as cellulitis and rhabdomyosarcoma should be considered in the differential diagnosis in children.

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