



Management of White-Eyed Blowout Fracture in the Pediatric Population

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Received: 28 November 2019 / Accepted: 8 June 2020
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Abstract

Aims and objectives Diplopia in children is uncommon. However a small group of patients present with diplopia and severe restriction of upward globe movement which requires early diagnosis and prompt intervention. This study aims to evaluate the timing of intervention and functional outcome in the management of white-eyed blowout fractures.

Methodology The study was conducted in a tertiary level trauma center. There were a total of 46 orbital floor injuries over a period of 2 years out of which 4 patients with white-eyed blowout fractures were identified. Details of each case were entered on a standard data base and analysed with respect to age, mode of injury, extent of limitation of gaze, timing of intervention, pre and post-operative diplopia. Minimum follow up period for every case was 1 year.

Results All of them had sports related injuries. Three of the four patients had complete recovery from diplopia with full range of eye movements. However one child with delayed presentation didn't recover fully and had persistence of symptoms within the functional range.

Conclusion White-eyed orbital blowout fracture in kids though uncommon need prompt diagnosis and management for complete recovery. The initial clinical presentation mimics that of head injury and hence can be missed, leading to a delay in diagnosis resulting in incomplete recovery.

Keywords Orbital blowout · White-eyed blowout · Pediatric orbital fractures · Ocular trauma

Introduction

Pediatric facial fractures comprise less than 15% of all facial fractures. Orbital blowout fractures constitute about 20% of all pediatric facial fractures. With increase in unsupervised physical activity and involvement in sports, a peak in fracture incidence occurs during puberty and adolescence [1]. Diplopia in children is uncommon. However, a small group of patients present with diplopia and severe restriction of upward globe movement which requires early diagnosis and prompt intervention.

We report four cases of white-eyed blowout fractures which bear the classic features described by Jordan (1998) with minimal or no clinical signs of soft tissue trauma (white-eye), restriction of upward gaze, diplopia, lack of enophthalmos and radiological signs of minimal bone fracture [2]. This study aims to evaluate the timing of intervention and functional outcome in the management of white-eyed blowout fractures.

Methods

The study was conducted in a tertiary level trauma center over a period of 2 years (2017–2019). There were a total of 46 orbital blowout fractures out of which four patients with white-eyed blowout fractures were identified. Details of each case were entered on a standard database and analyzed with respect to age, mode of injury, extent of limitation of gaze, timing of intervention, and pre- and postoperative diplopia. The patients were clinically

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