

An unusual case of tetanus secondary to orbital trauma

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ABSTRACT

A case report on an unusual case of orbital trauma was reported on a patient previously treated as a psychiatric condition at district hospital level, 3 weeks before he was examined in the Ophthalmology Department and diagnosed as a case of tetanus secondary to orbital trauma by retained piece of wood in the left upper eyelid. The piece was then removed and patient healed after one week of antibiotherapy and anti-inflammatory treatment. He was reviewed 2 weeks later with a complete healing.

Keywords: Orbital trauma - tetanus

RESUME

Un cas clinique de traumatisme orbitaire a été décrit sur un patient précédemment traité comme un cas psychiatrique dans un hospital de district 3 semaines avant qu'il soit examiné et traité dans le service d'ophtalmologie comme un cas de tetanos secondaire à un traumatisme orbitaire par un morceau de bois dans la paupière supérieure gauche. Le morceau de bois a été enlevé et le patient guérit après une semaine d'antibiothérapie et anti-inflammatoire. Deux semaines après, le patient était complètement guérit.

Mots-clés: Traumatisme orbitaire, tetanos

INTRODUCTION

Orbital trauma represents an important cause of vision and life threatening across the world [1]. The setting and causes of eye injury are diverse, but previous studies demonstrated that the risk and type of injury is often correlated with a certain category of activities, then also the age [1,2]. Ocular injuries include all damage caused to the eye and its adnexa, orbital and peri-orbital tissues due to direct contact with fixed or mobile blunt or sharp objects, hot objects chemical substances, sources of electrical power or different types of radiation [3]. While a focused history and prompt ocular examination are essential for appropriate management, patient education regarding safety precautions and risk reduction helps to prevent future recurrences [4].

CASE PRESENTATION

We report a case of 17 years-old-male, referred to Kigali University Teaching Hospital for proper investigation and management. The patient came complaining for left orbital pain and swelling, poor vision after he sustained injury by a piece of wood 4 weeks pre-admission. History occurred when the patient was walking at night back home and slipped on the ground with his frontal head knocking at the tree roots and the left eye became injured and soon swollen with limited visual acuity. One week later, the patient's condition became worse. He was confused, with a good general condition. He decided to consult Ndera Psychiatric Hospital where he got unspecified treatment and went home for another one week without remission. He consulted again Ndera Hospital and immediately was referred to Kibagabaga Hospital

where he spent 4 days, then referred to Kigali University Teaching Hospital. On admission in the Emergency Unit, the patient had left orbital swelling, fever, contracture of masticating muscles, false route while drinking, and he had not passed stool since 5 days. General examination was good except that the patient was having contracture of masticating muscles and was unable to move adequately the lower limbs. Patient was treated as a case of systemic infection, after haemogram showing hyperleucocytosis of 10,000 WBC. Referred to the ophthalmology department, ocular examination was showing a swollen left orbit with incarcerated piece of wood on the medial upper eyelid as visible on the requested radiography of the basis of the skull (opaque area in the left medial upper eyelid). Diagnosis was tetanus associated with orbital cellulitis secondary to injury by piece of wood. Patient was brought to surgical theatre where a huge piece of wood of 0,5cm over 2,4cm was removed from the left medial upper eyelid.



Figure 1: Piece of wood removed from the left orbit, medial side

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Figure 1: Surgical team after removal of the piece of wood

After 3 days of intravenous ceftriaxone and diclofenac, remission of the left orbital swelling was noticed. A complete remission of the orbital swelling was observed after 1 week of intravenous ceftriaxone. Patient was discharged on the 7th day after treatment. He was reviewed 2 weeks later with a complete healing.

Discussion

Orbital trauma is described as the leading cause of unilateral blindness across the world [1]. Orbital foreign bodies may be organic or inert. Organic foreign bodies like wood need to be removed at the earliest due to the associated high risk of infection. Inert materials like glass or plastic are associated with lesser risk of infection and a decision to remove them should be based on factors like site of injury, size and shape of the foreign body, potential of secondary injuries or hemostasis [1]. The particularity of this case is that wrong diagnosis was made for almost one month, causing unnecessary movement of the patient from district hospital to neuropsychiatric hospital without real diagnostic and proper treatment. This uncommon presentation shows how this patient had huge organic intra-orbital foreign body for many weeks without having ocular or life threatening condition like cavernous sinus thrombosis, brain abscess, meningitis or blindness. This highlights the importance of not only educating our populations but also training health care personals on emergency ophthalmological conditions at district level, so that patients can obtain earlier diagnosis and treatment.

Literature review described some physical characteristics of the foreign body like mass and shape as of prognostic importance [5]. It was reported on this patient an unusual huge piece of wood not damaging the visual acuity or any other important orbital tissues. This case report

was different from findings described in Colombia where foreign bodies of greater mass were associated with worse visual outcome [5]. X-ray and computed tomography scan remain the investigations of choice in the management of orbital trauma. X-ray described an opacified superomedial left orbit involving almost the ethmoidal sinuses. The decision to operate on this patient was based up on X-ray results and also after proper evaluation of the orbital and systemic condition of the patient. This was the wright decision because of the high risk of infection with organic orbital foreign bodies as discussed earlier. Some reports concluded that delay in performing surgical procedure does not influence the final clinical or visual outcome in case of orbital foreign body condition [6]. In the present case, surgery was performed more than one month after the injury without the usual serious infectious spreads like cavernous sinus thrombosis, brain abscess. However, this patient developed tetanus with orbital cellulitis without any further complication as a result most likely of the antibiotherapy the patient was using. This highlights how delay in removal of orbital foreign body can be dangerous and cause ocular and life threatening conditions.

Conclusion: An unusual case of orbital foreign body is an ocular and life threatening condition that can be dangerous if proper diagnosis and treatment are not performed earlier. Education of our populations and training of health professional is important to avoid further spread of infection.

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