Case Report

An unusual journey of a periocular date palm thorn

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Abstract

An 8-year-old boy presented with a left lower lid swelling of one month duration. His parents gave a history of date palm thorn injury on left side of the forehead three months back which was removed partially by a local doctor. On examination, there was a left infraorbital swelling with diffuse oedema of the left sided cheek and temporal fossa. A scar mark (entry wound) was detected over the left eyebrow. Three-D configuration of contrast enhanced computed tomography (CECT) of the orbit showed a linear foreign body behind the zygomatic bone. The lower lid mass was excised, the date palm thorn was recovered from a pocket behind the zygomatic bone. Histopathology of the excised mass showed presence of granulation tissue. We describe the management of such a rare case along with review of literature.

Keywords: Periorbital injury, Date palm thorn, 3D imaging

Introduction

Date palm thorn injuries are common in Middle Eastern countries, where there are many date palm plantations. The injuries are usually caused by the thorns lying beneath the trees in place who work in the plantation. Date thorn is a modified leaf that ends in a spine of the palm tree, Phoenix anarensis. Most of the injuries happen to workers in the plantation or to children. The thorn may contain some toxic substance, probably an alkaloid substance, which are presumed to cause osteolytic reactions in the bone. The stab causes an acute local inflammation even if no part of the thorn remains in the affected tissue. Periocular date palm thorn injuries are relatively rare. Here, we will describe unusual presentation of a periocular date palm thorn injury and it’s management.

Case report

An 8-year-old male child presented to eye out patient department (OPD) with a left lower lid swelling associated with mild pain since last one month. His parents gave a history of date palm thorn injury over the lateral side of left eye-brow 3 months back while playing. Shortly after the injury, one thorn was removed by local doctor. Since then he was complaining of mild pain over the entry wound and the left periorbital area. A swelling appeared just below the lower lid of left eye since 1 month of injury, which was progressively increasing in size.

On examination, his visual acuity in both the eyes was 6/6. Both the anterior and posterior segment were within normal limit. A diffuse swelling was spreading over the left side of the face from the left orbit upto the tragus. A localized
swelling of 2.5 × 2.5 × 1 cm was present just below the lower eye lid of left eye (Fig. 1). It was oval, non-tender, firm in consistency with erythematous skin. On careful examination, a scarred entry wound mark was detected lateral to left supraorbital ridge (Fig. 2).

Plain contrast enhanced computed tomography (CCET) showed a linear foreign body in periocular area, but it failed to localise it exactly. 3D reconstruction of CECT showed a linear foreign body behind the zygomatic bone (Fig. 3).

Patient was admitted and operated under general anesthesia for removal of the date palm thorn and the tumour like lesion under pre operative systemic antibiotic coverage. The surgery was done in two steps. In the first step, the tumour like lesion was dissected out from the surrounding soft tissue and periosteum by giving subciliary incision (by ophthalmologist). Serosanguinous material came out from the lesion. The second step of surgery was performed by a neurosurgeon of the hospital. The subciliary incision was extended temporally and soft tissue dissection was done to locate a slender organic foreign body in a pocket underneath the temporalis muscle which was removed with forceps (Fig. 4). Temporalis fascia and the skin incision was closed with 4–0 vicryl suture and pressure bandage applied. The ruptured tumour like lesion was sent for histopathological examination. The extracted thorn was sent for gram stain and culture but no organism was detected. Postoperatively intravenous ceftriaxone and amikacin were given for a week followed by oral antibiotic and seropeptidase for another one week. One month follow up showed scarring of left lower lid producing cicatrical ectropion (Fig. 5). We planned for surgical correction of ectropion but the patient did not turn up subsequently.
Discussion

Date palm thorn injuries if detected early, can be treated without subsequent complications, but in children the diagnosis can be missed resulting in late complications as in our case. There may not be any proper history or visible signs of injury. In this case, history of date palm thorn injury and scar mark over the left eyebrow was present. Sometimes, attempts at removal may leave part of the sharp tip of the thorn inside the body which can present as granuloma (thorn-induced pseudotumor) or osteomyelitis. Tissue damage may also be caused by toxic substance or bacterial infection occurring even in the absence of a remnant thorn particle.

Localisation of the thorn is very important for its removal without much tissue handling. Ultrasonography may fail to detect it sometimes. In our case plain computed tomography (CT) failed to diagnose the exact location of the thorn, 3D reconstruction helped to identify its deep seated location. The identified route of the date thorn was from left supraorbital region to left lower eyelid and then to the zygomatic area. We presume that muscular contraction in the periorcular area propelled the thorn to change its location. Presence of the thorn in the lower lid area might have produced the inflammation and the granulation tissue formation in this case.

Histological examination demonstrated a severe inflammatory reaction with granulation tissue in this case, but no granuloma was found. Bacterial growth after plant thorn injuries has been rarely reported. Though microbiological report of the thorn and the swelling was negative in our case, but the serosanguinous discharge from the wound was exuding for at least 10 days after the surgery. This may be the cause of poor wound healing and bad cosmetic appearance of our case.

Management of such case needs multidisciplinary facilities like ophthalmologist, radiologist and neurosurgeon. Early detection and intervention will prevent morbidities. Primary care physician should try to remove the thorn remnants in initial stage to prevent complication.

Conflict of interest

The authors declare no conflict of interest.

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