Case Report: Earlobe Inflammation from a Palm Thorn Injury

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Abstract. Injury from the thorn of a palm tree is characterized by a prolonged, painful inflammatory reaction. Even when the source of the inflammation is diagnosed, appropriate treatment is usually delayed because family doctors are not familiar with the entity. Penetration of a palm thorn into the earlobe is an unrecognized cause of local inflammation. We describe a case of injury from a palm tree thorn in this uncommon site. We present the technique of transillumination for the identification and removal of the palm thorn.

INTRODUCTION

Injury from the thorn of a palm tree is characterized by a prolonged, painful inflammatory reaction.^{1,2} The incidence of palm tree injuries is apparently higher than that recognized in the literature since many cases are neither diagnosed nor reported.³ Even when the source of the inflammation is diagnosed, appropriate treatment is usually delayed because family doctors are not familiar with the entity.

Penetration of a palm thorn into the earlobe is an unrecognized cause of local inflammation. We describe a case of injury from a palm tree thorn in this uncommon site. We present the technique of transillumination for the identification and removal of the palm thorn.

DESCRIPTION

A 32-year-old clerk passed through a side road on the way to work. On her way, she felt a prick in her left ear from a branch of a palm tree, but she did not give it serious attention. Twenty-four hours later she came to the clinic complaining of pain and swelling in her earlobe. On examination, there was local swelling and significant erythema of the right earlobe with considerable sensitivity to gentle touch. To diagnose the condition without causing pain, 2 mL of 1% lidocaine were injected by infiltration into the base of the earlobe. After injection of the local anesthetic, the palm tree thorn, which was undetectable before, was demonstrated by transillumination using an otoscope (Figure 1). Under transillumination, the tiny palm thorn was extracted using a 23-G needle. After the palm thorn was removed (Figure 2) there was spontaneous drainage of a relatively large amount of serous fluid mixed with blood. At 24 hours follow-up, there was no swelling or erythema and only minimal sensitivity to touch.

DISCUSSION

The literature contains only sporadic reports of palm thorn injury that caused synovitis or arthritis, primarily in children.^{3–6} These patients were treated in tertiary centers. In a series of eight patients who were treated in the community, it is apparent that treatment in the community is feasible and that palm tree injury causes a local pain syndrome than can

FIGURE 1. Palm tree thorn demonstrated by transillumination using an otoscope.

persist for a long time (mean = 12.6 ± 5.9 weeks) even when the palm thorn is removed.²

The thorn injury causes a local inflammatory reaction that can last for a long time even when the palm thorn is removed from the site of the injury. In one study, the investigators inserted a 3-mm palm tree thorn under the skin of rats. A histological examination of the tissue demonstrated a strong inflammatory reaction with granulation tissue. In cases where the thorn was not observed in the tissue, necrotic and granulation tissue could be seen that contained aggregations of mononuclear cells. In cases where the organic foreign body was demonstrated, there was fibroblastic proliferation with revascularization in the region.⁷ It is possible that the injury exposes the tissue to toxins that cause the local inflammatory response.²

Pantoea agglomerans (a gram-negative rod from the *enterobacteriaceae* family) was isolated from inflamed fluid from a 14-year-old boy who sustained a palm tree injury.

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FIGURE 2. Transillumination of the earlobe after removal of the palm tree thorn.

There are only scant reports of infectious agents in cases of palm tree injury, but in those reports *P. agglomerans* was the most common cause.⁶ This bacterium is not considered to be aggressive, but it can cause prolonged local inflammation.⁶

Otoscopes, which have a light source and a magnifying glass, can be useful not only for ear examinations, but in all situations in which good lighting and magnification can help in the diagnostic work-up, such as fistulae, sinus tracts, foreign body infections in the eyes, and the demonstration of urogenital foreign bodies, especially in babies and children. The use of transillumination can help with the insertion of intravenous catheters and the collection of blood samples in babies.⁸

The best way to treat palm tree injury is to identify the thorn and remove it from the tissue. This can be accomplished by minor surgery as in the present case or by more invasive procedures. Even when the organic foreign body cannot be identified, cleansing of the tissue and the removal of toxic substances from the body can shorten the symptomatic period.² The pain can be treated with nonsteroidal anti-inflammatory agents, which can produce a temporary alleviation of pain. There is no evidence in the literature that one therapeutic strategy is better than others in these cases.

In summary, family doctors should be aware of and know how to diagnose and treat organic foreign bodies, including palm thorn injury. The use of an otoscope can help in identification of the foreign body and its removal. Appropriate early treatment can shorten the symptomatic period and prevent suffering.

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