



Can water lacerate a tendon? A car-wash accident: A lacerated extensor hallucis longus tendon



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ABSTRACT

Our purpose in this report, involving an unusual mechanism described for the first time in the literature, is to show that high-pressure water sprays used for washing cars can cause injury to the extensor hallucis longus (EHL).

A 21-year-old man presented to our emergency department (ED) due to looseness in the hallux. His history revealed that while operating a pressurized water spray machine for car-washing one week before, he had inadvertently sprayed his foot, and despite wearing protective plastic boots this had resulted in a laceration at the level of the hallux, which had been sutured in a state hospital.

Cleaning equipment using pressurized water can be dangerous if sufficient safety measures are not taken. We think that such occupational accidents with serious outcomes can be prevented through simple protective measures.

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1. Introduction

Patients with tendon laceration frequently present to the (ED) due to trauma. Foot tendon injuries are relatively uncommon. Our purpose in this report, involving an unusual mechanism described for the first time in the literature, is to show that high-pressure water sprays used for washing cars may cause injury to the extensor hallucis longus (EHL) tendon.

2. Case report

A 21-year-old man presented to our ED due to looseness in the hallux (Fig. 1a and b). His history revealed that while operating a pressurized water spray machine for car-washing one week before, he had inadvertently sprayed his foot, and despite wearing protective plastic boots this had resulted in a laceration at the level of the hallux, which had been sutured in an other hospital (Fig. 2). The initial partial looseness in the toe worsened, and he subsequently presented to our hospital. Physical examination revealed a 3-cm-

long partially healed incision proximal to the dorsal part of the metatarsophalangeal joint, with limited dorsiflexion, in the right hallux. Therefore, laceration of the EHL tendon was suspected (Fig. 3). Surgery was performed one week later, a splint was applied for 3 weeks and complete healing was observed after a short-term physiotherapy.

3. Discussion

EHL muscle forms a tendon by attaching the dorsal aspect to the base of the distal phalanx. EHL lies between the tibialis anterior and extensor digitorum longus muscles, assists the dorsiflexion of the toe, and eversion and inversion of the foot. EHL injury is well-documented in the literature.¹ When laceration occurs to the EHL, early surgical repair is recommended in order to prevent tendon retraction and symptomatic hallux flexus and equinus.² Our case is the first report of EHL injury involving pressurized water spray as a mechanism. One of the most commonly used methods for washing cars involves pressurized water sprays, which is both practical and effective. However, the safety of using pressurized water is unclear. Such equipment may cause workforce losses and temporary or permanent health problems as a result of various types of injuries, such as eye perforation, skin infections and ear lacerations.

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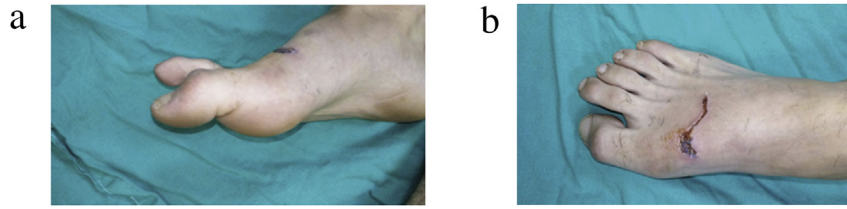


Fig. 1. First examination.



Fig. 2. Water pressure machine.



Fig. 3. EHL tendon rupture.

4. Conclusions

Cleaning equipment using pressurized water may be dangerous if sufficient safety measures are not taken. We think that such occupational accidents with serious outcomes can be prevented through simple protective measures.

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Conflict of interest

None Declared.

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