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Simultaneous dorsal dislocation of the proximal interphalangeal joints in two digits: A case report

Ardıřık iki el parmağında proksimal interfalangeal eklem ıkığı: Olgu sunumu

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Abstract

Majority of proximal interphalangeal (PIP) joint dislocations are dorsal dislocations but multiple PIP dislocations of the adjacent digits is very rare. This study presents a very rare case of a 82-year-old man who had two PIP dislocations in the same hand. He was successfully treated by closed reduction and he had no loss of function at final follow-up. Multiple PIP dislocations in the same hand are seen rarely, when treated properly, outcome is excellent even in elderly.

Keywords: Finger dislocation, Trauma, Reduction

Öz

Proksimal interfalangeal (PIF) eklem ıkıklarının çoğu dorsal ıkıklar olmakla beraber ardıřık parmaklarda nadiren gözlenmektedir. Bu çalışma 82 yaşında bir erkek hastanın aynı elindeki iki adet proksimal interfalangeal eklem ıkığını sunmaktadır. Hasta kapalı redüksiyon ile başarılı şekilde tedavi edilip son takiplerinde tamamen iyileşme gözlenmiştir. Çoklu PIF eklem ıkıkları aynı elde nadiren görülmele beraber uygun tedavi edildikten sonra sonuçları oldukça iyidir.

Anahtar kelimeler: Parmak ıkığı, Travma, Redüksiyon

Introduction

The proximal interphalangeal (PIP) joint is prone to injury because of its long lever arm but the prognosis is mostly excellent [1]. The majority of PIP joint fracture dislocations are dorsal dislocations. Injuries may be stable or unstable, which helps to decide to proceed to nonsurgical versus surgical treatment [2]. Achievement of a concentric reduction with early motion is the key to successful treatment of the PIP joint injuries and also edema control is important to reduce stiffness and contracture [1].

Case presentation

A 82-year-old man who had admitted Emergency department following unwitnessed injury to his two fingers of right hand. The mechanism of injury was pivoting his right hand on the floor during falling from his bed. His examination revealed a swollen and deformed second and third fingers at his right hand. Distally sensations and capillary refill was normal. X-rays showed dislocations of second and third PIP joints (Figure 1).

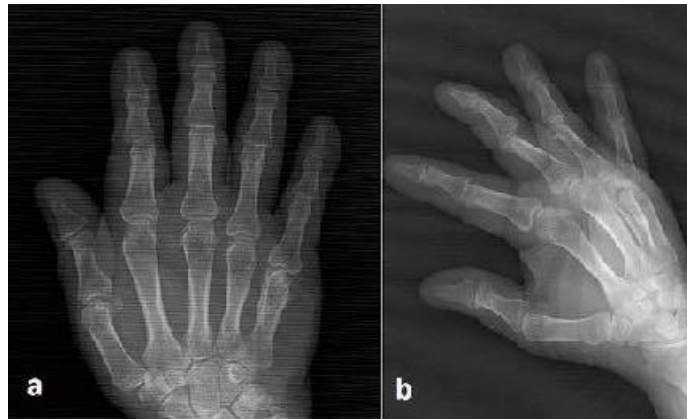


Figure 1: Prereduction x-rays

The joints were reduced by longitudinal traction after digital block. The joints were both stable in full extension and flexion after reduction. Early range of motion was applied and the patient was evaluated every week for 6 weeks postreduction. He had full range of motion and showed no instability (Figure 2).



Figure 2: Final follow-up x-rays

Discussion

The PIP joints' stability is mostly dependent on its bony articular contours, the collateral ligaments, and the volar plate. The boxlike complex well secured laterally by the collateral ligaments and volarly by the volar plate is the most important contributor to the PIP joint stability. For displacement of the middle phalanx to occur, this complex must be disrupted in at least two planes. Typically, collateral ligaments fail proximally, and the volar plate avulses distally [3,4]. If the dislocation is stable, usually nonoperative treatment is enough. Dislocations that are tenuously stable (subluxate only near full extension) may be treated with a figure of eight splint as well [1,3]. The most common complications after PIP dislocation are: Stiffness and flexion contracture, chronic swelling, swan neck deformity, redislocation and subluxation [1]. Early active motion after dorsolateral dislocation of the PIP joint produces significantly superior results regarding the active range of motion and pinch power than static splinting [5]. There are case reports for multiple joint dislocations in the same digit but PIP dislocations of the adjacent digits is not seen often [6,7]. The potential mechanism for dislocation of adjacent PIP joints is probably the same as the case report of Gonzalez and Elhassan: volar surface of the injured digits were the contact points on the floor during falling down from the bed and hyperextension of the PIP joints damaged the capsule and/or the collateral ligaments sufficient enough to dislocate the joint [7].

During the visits the patient was evaluated about hyper laxity but there was no finding suggesting this pathology. Early range of motion prevented contracture and swelling. Considering our patient's age achieved range of motion and stability is excellent. Multiple PIP dislocations in the same hand are seen rarely, when treated properly, outcome is excellent even in elderly.

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