

Question 1

A 12 year old boy presents to the ER after sustaining an elbow injury while skateboarding. He states that he was skating really fast down an incline at a skateboarding park when he lost balance and fell backward, breaking his fall with his right arm, which now has moderate swelling over the elbow and prominent olecranon. His x-ray follows.

Question 1



Reference: Medscape, Elbow Dislocation in Emergency Medicine Author: James E Keany, MD, FACEP; Chief Editor: Rick Kulkarni, MD,
<http://emedicine.medscape.com/article/823277-overview#a0104>

Question 1

Of the following, which is the most likely additional exam finding?

- A. Loss of pulses distal to the injury
- B. Decreased sensation over the palmar surface of the thumb and index finger
- C. Decreased sensation over the fifth finger
- D. Inability to extend the wrist
- E. Decreased flexion of the fourth and fifth digits

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Question 1 Discussion

- Posterior elbow dislocation is the most common joint dislocation in children, with peak incidence at age 12
- It is often caused by a fall onto an outstretched hand with extended elbow
- Associated neurovascular injury is not common but if present requires expedited reduction
- The most common nerve injury is to the ulnar nerve, which results in loss of wrist flexion, finger abduction, and decreased sensation over the fifth digit
- Median nerve injury is less common and radial nerve injury is even less likely
- Brachial artery injury is possible and the most serious potential complication

Question 1 References

- Chorley J. Elbow injuries in the young athlete. *UpToDate Online* 19.3. 2010
- Wheelless CR III. Elbow dislocations in children. *Wheelless' Textbook of Orthopaedics*. 2008.
http://www.wheelessonline.com/ortho/elbow_dislocations_in_children
- Medscape, Elbow Dislocation in Emergency Medicine. Author: James E Keany, MD, FACEP; Chief Editor: Rick Kulkarni, MD.
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Question 2

A 12 year old girl was brought to the ED after injuring her right ankle while running down the stairs. The ankle appears deformed and swollen with the foot displaced posteriorly. Which of the following is the most common associated finding?

Question 2

- A. No fracture
- B. Fractured talus
- C. Fractured calcaneus
- D. Fracture of the distal fibula
- E. Fracture of the anterior aspect of the tibia

Question 2

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Question 2 Discussion



<http://www.google.com/imgres?q=posterior+dislocation+of+ankle&um=1&hl=en&client=safari&sa=N&rls=en&biw=1247&bih=636&tbm=isch&tbnid=U0osPugE1OhCmM:&imgrefurl=http://www.fighttimes.com/magazine/magazine.asp%3Farticle%3D481&docid=CdT3b8rmMU4EEM&imgurl=http://www.fighttimes.com/magazine/images/200604/med-cell-xr9.jpg&w=400&h=488&ei=T-whT8CIDo-htwf51oSiCw&zoom=1&iact=hc&vpx=89&vpy=124&dur=417&hovh=248&hovw=203&tx=91&ty=160&sig=103403884983895447225&page=1&tbnh=138&tbnw=101&start=0&ndsp=20&ved=1t:429,r:0,s:0>

Question 2 Discussion

- Posterior dislocation of the talus is the most common form of ankle dislocation
- True ankle dislocation without concomitant fracture is rare and there are only a few case reports
- In addition to a strong association with fractures, ankle dislocations are often open because of the thin layer of tissue that lies over the malleoli
- Risk factors include history of prior ankle fractures, ankle sprains, weakness of the peroneal muscles, malleolar hypoplasia, or ligamentous laxity such as may occur with Ehlers-Danlos syndrome and other connective tissue disorders

Question 2 References

- Medscape, Ankle Dislocation in Emergency Medicine Author: James E Keany, MD, FACEP; Chief Editor: Rick Kulkarni, MD. <http://emedicine.medscape.com/article/823087-overview>
- Medscape, Ankle Dislocation Reduction Author: Moira Davenport, MD; Chief Editor: Erik D Schraga, MD. <http://emedicine.medscape.com/article/109244-overview#a01>
- Nusem, Iulian MD; Ezra, Eli MD; Wientroub, Shlomo MD. Closed Posterior Dislocation of the Ankle without Associated Fracture in a Child. *The Journal of Trauma: Injury, Infection, and Critical Care Issue*: Volume 46(2), February 1999, pp 350-351