

# Unusual Doesn't Mean Unusable:

## Why Information About Uncommon Injuries or Conditions Is Important

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**T**he 4 articles in this month's E-publishing section all describe unusual pediatric injuries and their consequences and also emphasize the lack of established guidelines for treating such injuries. These case reports remind us that treatment cannot always be based on large numbers of outcome studies or evidence-based treatment recommendations, especially in the pediatric population; for such patients with rare injuries or conditions, the orthopedic surgeon must rely on his or her training and experience to make the correct diagnosis and determine the treatment with the best chance of obtaining an optimal outcome. The treatment of children's fractures and other childhood injuries and conditions is constantly changing and evolving, and the information from case reports adds to the body of knowledge we have gained from large prospective and retrospective studies and allows us to customize treatment methods for the individual child.

Although compartment syndrome might be quickly suspected in a child with a supracondylar humeral fracture or both-bone forearm fractures who had the symptoms described by Choi and colleagues in their patient, the diagnosis of compartment syndrome without fracture and a history of a seemingly minor injury requires a high degree of suspicion. In young children, making the diagnosis can be even more difficult. As the authors remind us, seemingly minor injuries of the upper extremity can lead to compartment syndrome in the pediatric population and, if untreated, can lead to disastrous consequences.

In the reports by Eastwood and colleagues and Grotz and colleagues,



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the diagnosis of the injuries was not difficult; the difficulty was in determining how treatment recommendations for these injuries in adults might need to be modified to avoid physeal injury in their pediatric patients. Eastwood and colleagues noted that, in their 9-year-old patient with a knee dislocation, this meant repairing some structures that would have been reconstructed in an adult patient. Grotz and colleagues repaired the lateral collateral ligament and capsule in their 7-year-old patient with an open tibiotalar dislocation. Kirschner wires inserted through the calcaneus for stability did not cause premature physeal closure. Both of these children had good outcomes.

Long-term consequences of a childhood injury are highlighted in the report by Tank and colleagues of the development of bilateral Marjolin ulcers 45 years after third-degree burns. Marjolin ulcers are carcinomas that originate in chronically irritated or traumatized tissue, most commonly after deep-tissue burns. Treatment of this patient's burns was conservative, and his injuries were allowed to heal by secondary intention. More recent recommendations to decrease the risk of Marjolin ulcers include the use of grafts for full-thickness burns and protection of the burns from repetitive trauma, but whether either of these would have prevented the development of these lesions in this patient is unknown. Tank and colleagues note that, because Marjolin ulcers have a tendency to become aggressive, careful monitoring and a high degree of clinical suspicion are essential for successful treatment.

Each of these case reports might be dismissed as merely another description of a rare injury or entity without clinical application for most practitioners, but it is through such unusual situations that the orthopedic surgeon hones his or her skills in diagnosis and treatment

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decision making, learning to interpret the available information to fit the particular case. Reliance on the purely evidence-based recommendations is not possible, because evidence is scarce, and reports of what works in one patient population (ie, adults) might not be applicable to another (ie, children). Reading reports of unusual

injuries or conditions reminds us to be vigilant, flexible, and open-minded

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in our diagnostic evaluations and to remember that treatment guidelines are not “one-size-fits-all.” It also is heartening to be reminded that we can adapt, modify, and apply our knowledge and experience to determine and carry out the best possible treatment for our patients, even those with uncommon conditions.