

93% of Paediatric Fractures Splinted Improperly



According to a recent study by researchers at the University of Maryland School of Medicine, approximately 90 percent of potential paediatric fractures are splinted improperly in emergency rooms and urgent care centres.

The findings of the research were presented at the American Academy of Pediatrics (AAP) National Conference & Exhibition in San Diego. The research evaluated 275 children and teenagers up to the age of 18 who had been treated in community hospital emergency rooms and urgent care facilities in Maryland. The study patients had a range of fractures affecting all extremities such as fingers, arms, ankles and knees.

Fractures and broken bones are quite common in children and adolescents. Approximately half of all boys and a quarter of all girls experience a fracture at some point before the age of sixteen. Splints are generally used to temporarily stabilise a possible fracture as well as to reduce pain. A strip of rigid material is placed on the extremity and is wrapped with a soft padding and an elastic bandage to hold it in place. Once splinted, patients can later consult with an orthopaedic surgeon who can remove the splint after evaluation.

The research shows that in 77 percent of cases, most of the improper placements of the splint occurred during the placing of the elastic bandage directly on the skin. In 59 percent of the cases, the joints were not immobilised correctly, while in 52 percent of cases, the splint was not the appropriate length. In nearly 40 percent of patients, skin and soft-tissue complications were observed.

According to Dr. Joshua M. Abzug, MD, Director of Paediatric Orthopaedics at the University of Maryland Medical Center, Assistant Professor of Orthopaedics at the University of Maryland School of Medicine and the senior author of this study, "Splints are effective for immobilisation of fractured extremities in children and adolescents when placed appropriately. Unfortunately, many practitioners in emergency departments and urgent care settings incorrectly applied splints, potentially causing injury."

Improper splinting can cause excessive swelling, blisters and other skin complications. Poor immobilisation of the fracture is also a likely consequence. That is why it is important for healthcare professionals to educate themselves and to train themselves on proper splinting techniques. Dr. Abzug is currently planning a follow-up study and will work with healthcare professionals in emergency departments and urgent care centres on how to apply splints correctly.

"This research points out a significant problem in caring for paediatric fractures in emergency and urgent care settings," says E. Albert Reece, MD, PhD, MBA, Vice President for Medical Affairs at the University of Maryland and the John Z. and Akiko K. Bowers Distinguished Professor and Dean of the University of Maryland School of Medicine. "Our mission is to educate doctors and healthcare providers, and we look forward to working with them to correct this problem."

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