Hybrid Casting of the Pediatric Wrist

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Pediatric distal radius fractures are commonly encountered. They are managed most often non-operatively. Typically, when a cast is used, it is a fiberglass cast with cotton padding or waterproof padding. Traditional Plaster of Paris casts are easily molded to hold fracture reduction. However, they are heavy, not water resistant, and easily worn out by active children. They are not used often because synthetic fiberglass casts offer a lightweight, water resistant, and more durable solution; however, they lack the ability to be well-molded to hold fracture reduction. Hybrid casting, the combination of an inner plaster sheath and outer fiberglass shell, takes advantage of both the moldability of plaster and durability of fiberglass. This is an important method for obtaining and maintaining reduction of forearm fractures that should be a part of every orthopedists' toolbox. However, there is a paucity of literature discussing the technique of hybrid casting, with the last relevant article in 2000 which was then referred to in a subsection of a review article in 2023. Hybrid casting deserves more visibility to teach clinicians this method of exceptional fracture immobilization. This video aims to be a teaching tool for clinicians involved in applying casts and reducing fractures. It aims to emphasize that successful casting is a collaborative effort involving a team that understand the mechanics that created the fracture that can then be used to reduce it. There are only very elementary videos available on casting, none as detailed as can be seen in this video with detailed anatomic explanations. 40 patient case series is reviewed.