

Radius And Ulna Fracture In A 10 Year Old Child - Intramedullary Fixation.

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Forearm fractures are common fractures seen in paediatric orthopaedic practice. It has been estimated that it amounts to about 50% of the fractures sustained in children before the age of 16 years. Moreover, the incidence has been on the rise, with up to a 5-fold increase in the incidence of forearm fractures over the last decade.

Historically, the majority of these fractures have been treated with non-operative management relying on closed reduction and cast immobilization. Patients younger than 10 years have a greater bone remodeling potential compared to older children. Therefore, greater degrees of fracture displacement and angulations can be accepted in younger children treated with cast immobilization.

The situation is much less clearer in those 10 years and above, such as in this case, especially since the correlation between the chronological age and bone age becomes increasingly poor. The management of these fractures largely depends on factors like age, type of fracture and fracture displacement. Many studies have shown superior results with operative treatment as compared to non-operative treatment.

The rise in surgical stabilization of the forearm fractures might be driven by improved understanding of functional implications of malunion, technological advances and societal expectations. Surgical treatment options include both elastic intramedullary nails and rigid plate fixation devices. Though superiority of one fixation device over the other is not established yet, the general trend is to use plates and screws for children closer to skeletal maturity and intramedullary nailing for those younger.

We embarked on a study to evaluate and compare the functional, radiological and surgical factors in the surgical management of forearm fractures in adolescent children using flexible intramedullary nails versus plates and screws with the Sauvegrain method of bone age measurement as a guide in 168 patients.

We found that both intramedullary nailing and plating have comparable outcomes in terms of rate of union and complications, regardless of chronological or bone age. However in view of it being less invasive and more biological with reduced operating time, intramedullary nailing is recommended for forearm fractures even in older adolescents.