CONCLUSION
CONCLUSIONS

This study which was conducted at Deptt. of Orthopaedics M.L.B. Medical College, Jhansi comprised of 21 children being admitted to the hospital with the diagnosis of displaced supracondylar fracture of the humerus after presenting at the OPD or Emergency, between the period from mid Sept.96 to Oct.97. The patients were treated conservatively and after reduction an above elbow cast was applied either in pronation or supination. In cases where it was deemed necessary delayed open reduction was done. Following conclusions were drawn from this study.

It is easy to diagnose a case of supracondylar fracture if a true lateral radiograph is taken. However, when the radiograph is not a true lateral one may miss the diagnosis specially in type II fractures.

Hyperextension of the elbow is a common finding in children and is present in up to 61% of children and may be even as high as -19°.

The peak age of incidence of this injury is between 6 to 8 years of life and is found in children between the age of 4 to 12 years.

The injury occurs most commonly due to minimal trauma which accounts for 71% of the mode of injury while only 29% suffer from this injury after severe trauma.

Left side is involved in 71% of the cases while the right side is involved in 29% overall. However the left sided dominance is slightly decreases in cases with a history of severe trauma.

The peak season for the injuries is bimodal with one peak in late spring while the other in late monsoon.

The injury is more common in boys who account for 66% of the cases.
Of the displaced fractures 20% are type II 30% are type III while 50% of type IV injuries.

In India the patients often present late to the hospital and may give a history of treatment by local unqualified bone setters.

Ipsilateral injury of both bones of the forearm are not rare and present as either fracture of the distal quarter of both bones or fractures of ulna in combination with fracture separation of the distal radial epiphysis. They may occur with any grade of supracondylar fracture, however a fall from height is usually elicited. Right side is more commonly involved in these cases.

The incidence of neurological complications is about 20% and is most commonly associated with type III fractures. Median nerve is most commonly involved specially its anterior interosseous branch and thus sensory loss is less common than motor loss. The neurological deficit is most commonly a neuropraxia which resolves spontaneously and watchful expectation is adequate.

Vascular complications occur in 5% of the cases and VIC may result from compartments syndrome. However the complete tear of the brachial artery is not necessarily associated with poor prognosis. The absent radial pulse may return immediately after reduction.

Excessive traction during reduction must be avoided. Gentle coaxing of the distal fragment with adequate traction is usually all that is necessary in fresh cases.

If all cases which present with prereduction varus are treated by the prone position of the limb a decrease in hospital stay might be expected in hospitals which lack an x-ray facility in the OT.
The prognosis of displaced supracondylar fracture of the humerus is excellent after treatment with conservative methods irrespective of the position of the limb as far as functions of the elbow are concerned. There is no significant difference in the final functional results which are similar irrespective of the grade of fracture. At the same time, open reduction and internal fixation particularly delayed treatment leads to unacceptable results.

The prognosis as far as loss of carrying angle is concerned is best in cases treated with the forearm in prone position. There are never any unacceptable results (i.e., never a loss of more than 15°). However, if the limb is kept in the supine position after reduction there is at least a one in ten chance of having an unacceptable varus deformity on healing. Open reduction and internal fixation does not guarantee maintenance of final carrying angle.

Thus it may be concluded from this study that closed reduction with prone position of limb in displaced supracondylar fracture of the humerus in children (grade II to IV Holmberg) is an adequate treatment and never leads to an unacceptable varus deformity while preserving functions of the elbow.

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