The “epiphysa” fibular nail - 45 cases during 30 months

Our experience and results

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Summary: This study is based on 45 observations of lateral malleolus fractures, treated by the epiphysa nail, since May 1994. Material: 4 isolated fracture of lateral malleolus. 27 Cases of ankle dislocation with bi or tri malleolar fractures. 14 cases associated with diaphysal or distal fracture of the tibia, astragalus fracture or medial ligament rupture. The sex ratio was 22 women for 23 men between 17 and 90 years old. Methods: Open reduction with internal fixation by epiphysa nail was used 38 times, and closed reduction and nailing 7 times. Post-operative immobilisation was used in all cases. Weight bearing was allowed on the 40th day. Results: 39 patients were reviewed with a minimum follow up of 6 months and maximum of 18 months. Results were considered excellent or satisfactory in 37 cases. Discussion: The authors report few complications and quick consolidation but they recommend a different procedure from that advised by the originator. They prefer open reduction and post operative immobilisation.

Key words: Lateral malleolus – Fractures – Epiphysa nail

We have become rapidly enthusiastic since starting to use the epiphysa nail when until when we used the Müller technique with plates, screws or hoops on lateral malleolus.

The nail has been suitable in nearly all cases.

Statistics

45 nails have been put in:
- 8 nails in 1994,
- 23 nails in 1995,
- 14 nails in 1996.

23 were in men and 22 in women, 17 nails were in the right and 28 in the left.

The 90 mm nail was used the most, (19 times) then the 70 mm nail (16 times) and the 110 mm nail (10 times) least often.

The patients were between 17 and 90 years old, with the majority of them between 40 and 70 years old (27 cases).

The nail was put open in 38 out of 45 cases.

The causes of the fractures were as follows:
- 27 simple falls,
- 8 farming accidents,
- 5 accidents in the street,
- 2 assaults,
- 1 fall from 2nd floor,
- 1 work accident,
- 1 undetermined cause.

The lesions were situated as shown in Figure 1 sometimes with several associated lesions.

Surgical technique

A small incision is made over lateral malleolus and a guide rod is introduced through the end, while controlling the fracture through a small incision, that helps to control the reduction.

Place a reamer on the guide rod allowing direct reading of the graduation.

We can choose the size from three diameters (70-90 and 110 mm).

It is placed on the guide rod and its proximal end screwed in the malleolar extremity with a screw driver.
The different materials used on other malleolar fractures were as follows:
- 18 screwings (Fig. 2),
- 12 titanium clips (Figs. 3, 4),
- 4 Kirschner pins,
- 2 Metaizeau's nail,
- 2 hoops,
- 3 medial ligament sutures.
In association with tibia's fractures:
- 4 tibial plates (Fig. 5),
- 1 orthopedic treatment.
In all cases, post-operative immobilisation with a plaster cast was used, followed by casting tape (scotch cast).
In almost all cases, weight-bearing was allowed before the 45th day.

Results

After more than one year, 39 cases were estimated in relation to the X rays and clinical exams.
- 34 cases were judged as excellent,
- 3 cases were judged satisfactory,
- 1 moderately good case,
- only 1 case had a bad result with a complex fracture of the distal extremity of tibia.

We have only removed 16 nails without any problem through a small incision.