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Re: Percutaneous plating of distal tibial fractures (2004) 28 (3):159

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Sir,

The technique of percutaneous plating described by the authors and the results obtained in treatment of the fractures of the lower tibia are very good. Closed treatment of tibial fractures has always yielded better results as compared to open methods. Percutaneous plating of long bone fractures provides good immediate stability, with minimal disruption of the soft tissue surrounding the fracture [1, 3]. The intact soft tissue causes rapid healing of fractures. Bone grafting procedures are rarely required both in primary setting and at a later date. However, some drawbacks associated with these techniques need to be highlighted.

The most common error with this method is seen in the X-ray example accompanying the article. The example shows fracture of the lower tibia treated with percutaneous plating. The fracture has healed with excellent final result; however, if the ankle joint is observed, the axis of the joint is tilted in valgus with respect to the distal fragment. This tilt is present through the preoperative and full postoperative follow-up. The reasons for this could be attributed to:

1. Comminution of the lateral side of the tibia more than the medial side
2. Inadequate restoration of fibular length (due to comminution)
3. Tibial plate undercontouring, as is seen in the example

The joint malalignment has to be anticipated and corrected during the surgical procedure. The way to do this is:

1. To ensure restoration of lateral length by use of a distractor device, if required
2. Proper contour of the tibial plate, which has to be done on the X-ray of the opposite side as per method described by AO

Joint malalignment in the long term causes arthritis. Anticipating joint deformity and taking active measures to correct it is necessary to get the best results from percutaneous plating. Contouring the plate on the opposite normal size will recreate contours of the injured side with a high degree of accuracy. Similar plating in the lower femur may result in extension of the distal fragment causing a recurvatum deformity. In an attempt to stay percutaneous, compromise on joint or limb axis and alignment should be avoided.

Without doubt, the percutaneous plating technique will improve with better implant design and instrumentation [1]; attention to details will ensure excellent results in all cases.

References

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