Letter to the Editor
Immediate interlocking nailing versus external fixation followed by delayed interlocking nailing for Gustilo type IIIB open tibial fractures

To the Editor:
We read with interest the article by Park et al. The authors defined nonunion as failure of a fracture to unite after 12 months rather than the usual 6 months. Serial radiography should have been used to evaluate the fracture union. A fracture can be considered in nonunion and undergo intervention when signs of progressive healing are absent as early as 3 or 4 months after repair.

Unreamed interlocking nailing is different from reamed interlocking nailing in terms of weight-bearing characteristics. Reaming increases the area of cortex the nail has contact with and hence produces a tight fit. Unreamed nails are exposed to more cyclical loads and carry increased risks of breakage of nails and screws. To hasten union and avoid screw failures, early dynamisation or exchange nailing and bone grafting are recommended.

The authors used unreamed, statically locked tibial nails to enable early weight bearing. This prolonged the healing time (21 months in the immediate nailing group and 14 months in the delayed nailing group). They also used unreamed nailing in several segmental and comminuted open tibial fractures. Fortunately, they did not encounter any screw breakage and malunion, despite the high incidence of such problems in other series.

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REFERENCES

Authors’ reply:
There are several definitions for bony nonunion. We use the one that defines it as no clinical, radiographic, or scintigraphic evidence of healing 12 months after injury and by the need for secondary surgery. Delayed union is defined as the completion of union more than 6 months after injury. Certainly, the time to union was delayed in our patients because they all sustained Gustilo type IIIB open tibial fractures with periosteal stripping, leading to slowed fracture healing. In addition, the calculation of the mean time to union included cases where union failed.
In our hospital, leg fractures are stabilised using static locked intramedullary nailing based on 2 laboratory studies.\textsuperscript{3,4} Dynamisation is indicated when union is delayed at 5 to 6 months after injury. Unfortunately, we did experience several cases of breakage of the nail or screw, including some in the present series.

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REFERENCES