Authors’ reply

1. We used the nails with the smallest diameter (8 mm) available in 92% of our patients; 9-mm diameter nails were used in only 4 patients, all 4 of whom were heavily built with wide medullary canals, which were measured radiologically at the narrowest part. We had no problem placing these nails in our patients; there was no incidence of bone split, no procedure was aborted, and no preliminary reaming was required. Another study in the Indian literature also reported the use of these nails in Indian patients without any problems.1

2. Many series have reported a high incidence of revision surgeries and implant failure, as cited by Dr Agarwal. Proximal screws were placed in a dynamic mode in 35 of our cases with transverse fractures, but only 6 cases with delayed union required proper dynamisation because the progress of fracture healing was adequate in the remaining cases. In a series of 52 fractures stabilised by AO unreamed nailing, Saikia et al.1 reported a low incidence of required dynamisation (6 of 52 cases), while primary fixation in dynamic mode was performed in 25 of 52 cases. In a series of 70 cases, Greitbauer et al.2 performed dynamisation in one case, while reaming and renailing was performed in 3 cases of delayed union.

3. Phemister bone grafting was performed in 6 of our cases showing delayed union. Four cases of infected non-union with chronic osteomyelitis were also grafted. Bone grafting was not required in most patients as they showed adequate fracture healing. Other reports have also shown a low incidence of bone grafting: Greitbauer et al.2 reported no bone grafting required in 70 cases, and Lin and Hou3 reported that only 4 of 52 fractures treated with unreamed solid nails required bone grafting or exchange nailing.

4. The incidence of screw failure in our series was only 14%, compared with 6% to 40% in the literature.4–6 The low incidence of screw failure was probably because patients were kept non-weight bearing until an adequate callus was formed. There was no other form of immobilisation used postoperatively in our patients. Other reports demonstrating a low incidence of implant failure in the literature include: 3.8% by Saikia et al.,1 3.8% screw failure and bone split by Lin and Hou,3 and 14% screw breakage by Greitbauer et al.,2 which are comparable with our series.

5. The mean shortening of the tibia in our series was 0.75 cm (range, 0–2 cm), the maximum being in comminuted grade-III fractures. The incidence of malalignment was low because only 10 fractures were comminuted while most were stable transverse fractures. Lin and Hou3 reported a low incidence of malalignment (3 of 52 fractures) due to operative technical error.

As stated in our conclusion, we have recommended using unreamed interlocking nailing only in grades I and II fractures, which are usually stable with minimal comminution.

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