

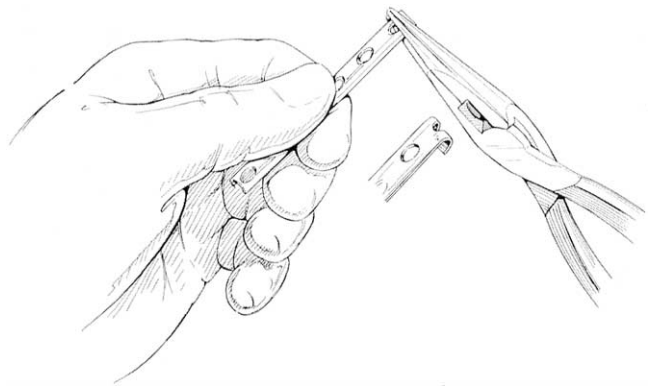
# Using a Hook Plate as Alternate Fixation for Fifth Metatarsal Base Fracture

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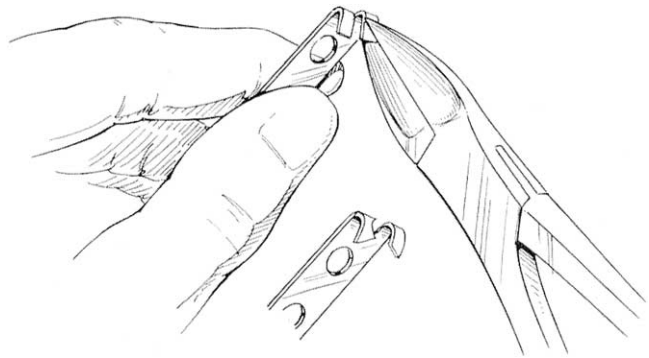
The poor vascular supply of the fifth metatarsal and its contribution to delayed union and nonunion has been documented (1). This has led to a variety of proposed methods for fixation of fractures involving the fifth metatarsal. Intra-medullary screw fixation may become difficult to achieve with cystic bone or with a fifth metatarsal base that is comminuted (2–4). When this occurs, a hook plate is useful to achieve reduction of fracture fragments with some degree of compression.

Myerson (5) and Hansen (6) have described the use of the hook plate. Myerson (5) described using this plate for the purchase of the distal aspect of the fibula in ankle fractures. Hansen (6) described its use for reduction of fragments involving pilon fractures. The hook plate serves to purchase a distal fragment and to reduce it to the diaphyseal aspect of the bone. We describe a technique using the hook plate for open reduction and fixation of fifth metatarsal base fractures.

After dissection to the base of the fifth metatarsal, the bone may be noted to be soft and cystic. In addition, fracture lines may be observed intraoperatively that may not have been noticed on radiographs. When this occurs, intra-medullary screw fixation or a one-third tubular plate can be unsatisfactory in providing stabilization of the fracture fragments. However, the one-third tubular plate can be altered to form a hook with the proximal portion of the plate (Figs. 1 and 2). The proximal hook can then be placed proximally



**FIGURE 1** The making of a hook plate. The end of a one-third tubular plate is bent as far as possible at the distal hole. Reprinted with permission (5).



**FIGURE 2** The corners are cut from the plate to make the hooks, which may be bent to conform to the bone or may be driven into the bone end. Reprinted with permission (5).

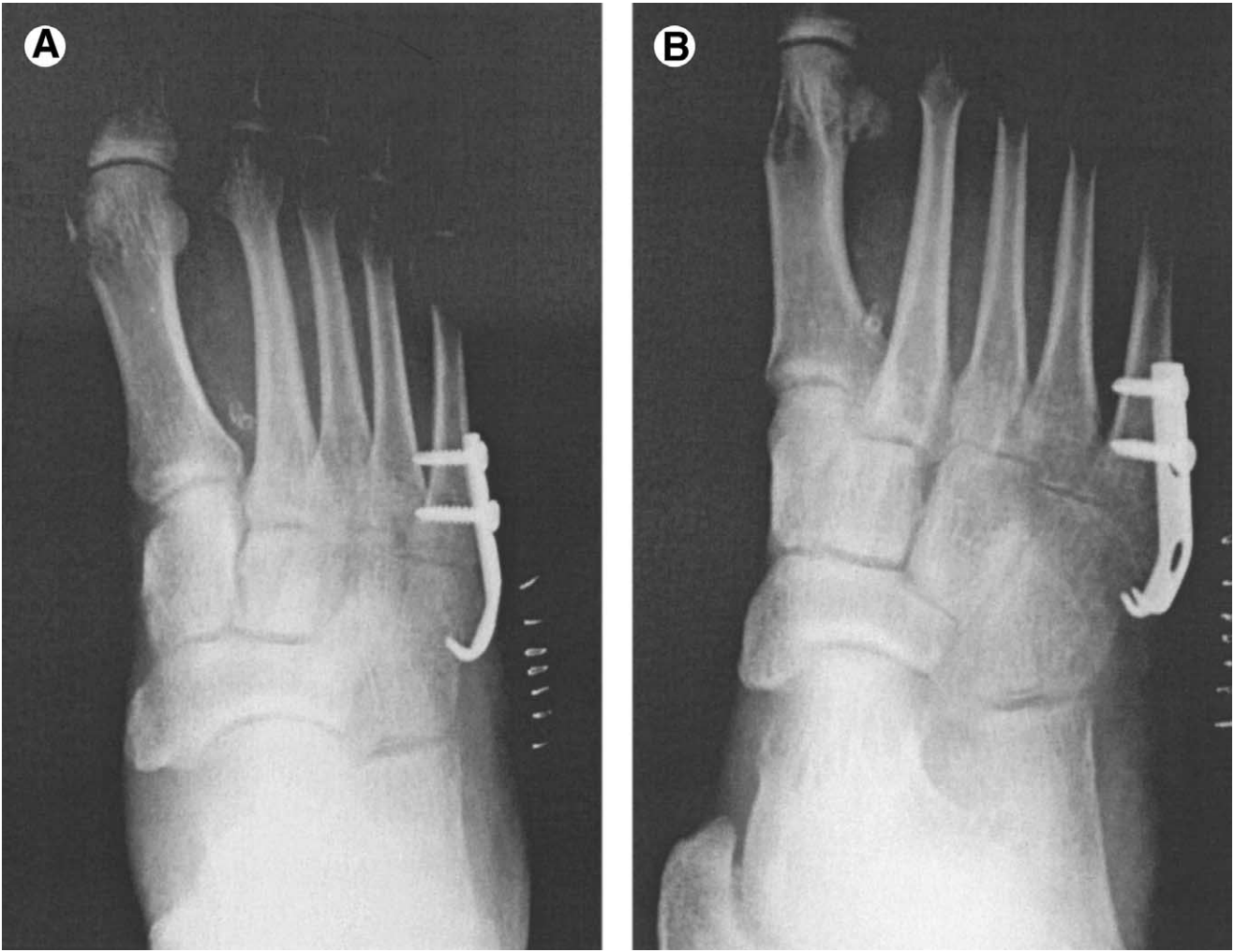
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**FIGURE 3** Radiographs of the right foot showing hook-plate fixation on the base of the fifth metatarsal.

and laterally into the tuberosity of the fifth metatarsal. Traction is then applied distally as the fracture fragments are reduced to their desired alignment. Once adequate reduction is achieved, bicortical screws are then placed into the diaphysis of the fifth metatarsal to secure the plate to the bone (Fig. 3).

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