Surgical Treatment of Pincer Nails

Pincer nails are a frequent condition, with different etiologies. The most frequent type involves the big toes, sometimes also the lesser toes. It is symmetrical and due to a widening of the base of the distal phalanx, as we have shown in systematic radiographic studies on more than 200 patients. As a consequence of the distally increasing overcurvature of the nail, the nail bed is pinched and heaped up. Because the distal nail bed and hyponychium are firmly attached to the underlying distal dorsal tuft of the terminal phalanx, a traction osteophyte develops. This can be removed by clipping it off or using a bone burr or rasp, but the wide base of the terminal phalanx, which is the primary cause of the pincer nail, cannot be narrowed because the lateral ligaments insert here and give the distal interphalangeal joint its stability. For this reason, we have proposed removal of the lateral matrix horns, removing the outward pressure from the matrix area. This treatment is often sufficient for mild cases of pincer nails.

Figure 1. (A) After the nail bed is exposed, the normal nail bed (black arrow) is seen with the surrounding fibrous tissues (white arrow). (B) Surface irregularities such as traction osteophytes (white dot) are easily removed using a bone burr. (C) The original nail was trimmed thin using the bone burr for final coverage of the nail bed. (D) Satisfactory results were obtained using this simple, effective, nail matrix-sparing technique without any complications.

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Division of Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan.

Reference

CHIN-TA LIN, MD
TIM-MO CHEN, MD
Division of Plastic and Reconstructive Surgery
Department of Surgery
Tri-Service General Hospital
National Defense Medical Center
Taipei, Taiwan
Lin and Chen have made interesting comments to our technique.\textsuperscript{3}

They request that fungal nail infections be treated first. Despite the commonly observed subungual hyperkeratosis, there is rarely a mycotic infection; we have seen this only twice in more than 300 cases examined histopathologically. Furthermore, after surgical correction, the nail grows better, and a fungal infection has better chances of being treated successfully.

Second, they avulse the nail using the rolling method—probably using a hemostat and pulling the nail off the nail bed by turning the hemostat clamp. This is traumatizing, so we use the proximal nail avulsion technique.

The authors mention that they excise the surrounding fibrous tissue, but it is not clear from their figure 1A whether they excise the lateral nail folds, as one would assume.

The authors claim that it is easier to remove the distal dorsal traction osteophyte using a burr or rasp than a bone rongeur. In figure 1B, they show that they elevated the nail bed as two narrow longitudinal flaps, allowing easy access to the underlying bone. Our technique of opening the nail bed using a single longitudinal incision does not expose the bone as well, but it is less traumatizing and has no risk of flap necrosis. A small bone rongeur or a pointed nail clipper allows the osteophyte to be clipped off without any difficulty.

It is our policy to use the patient’s own nail to cover the nail bed whenever possible,\textsuperscript{4} but the curvature with which the nail has grown is in the “memory” of the nail and will not flatten just by grinding the nail plate thinner. The case shown by the authors is a mild one, with a maximal asymmetrical curvature of 90°.

As in a number of other studies,\textsuperscript{5} the authors mention the secondary traction osteophytes but fail to report the widening of the base of the distal phalanx. This is often seen as hook-like osteophytes, which are much more pronounced medially than laterally and are probably the reason for the pronounced lateral deviation of the overcurved big toenail.\textsuperscript{1} Radiographs also show that the distal phalanx has a lateral deviation.

References


\textbf{Eckart Haneke, MD, PhD}
Department of Dermatology
Inselspital, University of Bern
Bern, Switzerland;
Dermatology Clinic Dermaticum
Freiburg, Germany;
Centro Dermatol Epidermis Inst CUF
Porto, Portugal;
and Department of Dermatology
Academic Hospital
University of Gent
Gent, Belgium