11:00 – 11:05 am
Scarf Osteotomy - Don’t Go Too Far
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- Main concerns
  - Width of the Metatarsal
    - need at least ¼ overhang
  - Direction of the short arms of the Z
    - Have to be parallel or divergent
      - If no – won’t be able to shift osteotomy
    - Better to make them fairly shallow – 3-4 mm
      - Less change of troughing
  - Fixation
    - At least two points of fixation

Even though the scarf osteotomy makes sense from a mechanical standpoint, it is not without multiple problems. The most common problem is “troughing” of the two halves of the metatarsal shaft. This happens when the cortexes wedge into the softer cancellous bone of the metatarsal shaft. This causes a functional elevation or dorsiflexion of the first ray that inevitably led to a pronated foot and lesser metatarsal overload.

Limiting the distal and proximal step-cut to 2-3 mm and therefore avoid cutting into the cancellous bone could probably minimize this problem.

Barouk advocates that the actual osteotomy is one of four steps of the bunion repair. A complete approach should include: a) MTP lateral release, b) Scarf osteotomy, c) medial capsulorraphy, and d) great toe proximal osteotomy.

Different lengths of the long arm of the Z do not appear to make a difference in the stability, but Barouk advocates that the long arm should go from the head/neck to the base. The use of a non-compressing screw could also limit the troughing effect.

Crevoisier reported a 19% complication rate with their Scarf osteotomies. Eight percent were minor and nine (11%) required an additional procedure. They also mentioned the significant loss of MTP motion due to the extent of the procedure.

The Scarf osteotomy works well in some hands, but there is a learning curve, and it does not solve all bunion problems.

References

2) Coetzee JC, Rippstein P. Surgical strategies: scarf osteotomy for hallux valgus. Foot Ankle Int.2007