Periangular calcaneal wound defects

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My disclosure is in the Final AOFAS Program Book. I have no potential conflicts with this presentation.
• **Introduction:** Lateral extensile approach to the calcaneum is frequently used for open reduction and internal fixation of calcaneal fractures. Wound related complications are frequently described in the literature. Out of 40 cases of closed calcaneal fractures treated by the author’s team in the last two years 6 wounds in 5 patients had delayed healing in the 2cm immediately adjacent to the wound curvature/angle.
• Methods: Retrospective presentation of cases with wounds defects/ delayed healing in the area of the wound curvature (The periangular area) in lateral calcaneal wounds. Out of 40 patients who were seen by the authors team in the years 2010 and 2011; The finding was detected in 6 wounds in 5 of these patients. Patients were operated in Hamad General Hospital for closed fracture calcaneum. ORIF done after swelling had reduced (positive wrinkle sign), 10 to 14 days post trauma. Wound closure was done in 2 layers. Patients were followed up in the clinic by the first author until wound healing.
Results: Two wounds were debrided surgically. Vacuum suction was used in bilateral wounds in one patient. Two wounds were treated with repeated dressing and secondary closure. All 6 wounds healed.
Periangular calcaneal wound defects
• This is a periangular ulcer of a lateral calcaneal wound appeared 4 weeks after initial surgery, which was performed at another hospital.
Discussion

• Possible causes suggested for periangular wound defects/ delayed healing:
• Initial dissection was not right. Too much stress on the distal flab corner during dissection and traction
• Poor vascularity at the flab corner
• Development of periangular skin tension related to the direction of bony reduction
• Development of skin tension at the corner during wound closure (the flab might have been pulled away from the corner by obliquely directed stitches)
• Inadequate deep stitches (difficult corner)
Discussion:

• To reduce incidence shortening of the vertical wound limb was suggested. However it was found by some to reduce exposure. And a periangular defect was also observed in one patient.
• Conclusion:
• The area adjacent to the corner in the lateral approach to the calcaneum is suggested to be seen as a high risk area for wound complications. Considerations and care are needed to reduce its incidence.

• References
• --Wound healing complications in closed and open calcaneal fractures. Bernischke, SK. Kramer, PA. Journal orthopedic trauma, 2004 Jan: 18(1)1-6