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COMPARISON OF WOUND HEALING RATE AND TIME TO COMPLETE WOUND HEALING ACCORDING TO WOUND LOCATION IN CRITICAL LIMB ISCHEMIA

Moderated Poster Contributions

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Background: The Rutherford classification system is used to evaluate wound features in critical limb ischemia (CLI). However, the location of the wound is not considered in this classification system. The aim of this study is to evaluate the differences in wound healing rate and the time to complete wound healing according to wound location following successful intervention.

Methods: Between April 2007 and October 2011, we treated 147 patients (174 limbs) with critical limb ischemia (CLI) classified to either class 5 or 6 according to Rutherford system. In these patients, 191 separate wounds were identified and divided into 3 groups. Group F was comprised of wounds localized only to the fingers, group H of those with wounds localized to the heel, and group D of those with wounds extending to the dorsum or the plantar surface of the foot. We investigated wound healing rates and time to complete wound healing in these 3 groups. Furthermore, we considered the number of wounded fingers while analyzing the healing rate in group F.

Results: Complete healing rate was 74% in group F, 65% in group H, and 19% in group D ($P < 0.001$). The median time to complete wound healing was 148 days (interquartile range ; 25 - 202 days) in group F, 251 days (interquartile range ; 92 - 317 days) in group H, and 191 days (interquartile range ; 41 - 265 days) in group D, respectively ($p < 0.05$). In group F, there was no significant difference in complete healing rate after adjusting for the number of wounded fingers. Multiple logistic regression analysis revealed that direct blood flow to the wound (OR 9.5, 95%CI 3.6-24.7, $p < 0.001$), body mass index (OR 1.16, 95% CI 1.0-1.3, $p=0.038$), gangrene (OR 0.19, 95%CI 0.07-0.52, $p = 0.001$), wounds extending to the dorsum or the plantar surface of the foot (OR 0.11, 95%CI 0.04-0.34, $p < 0.001$), alb levels (OR 2.45, 95%CI 1.10-5.47, $p = 0.029$) and hemodialysis (OR 0.18, 95%CI 0.07-0.45, $p < 0.001$) were independent predictors of complete healing.

Conclusions: The healing rate of wounds extending to the dorsum or the plantar surface of the foot was poor. Wounds located at the heel were curable, but the time to complete healing of these wounds was longer than that of wounds located on the finger.