

From Diabetic Ketoacidosis to Healing: Coordinated Limb-Sparing Management in a Child

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INTRODUCTION

An 11-year-old with type 1 diabetes presented in DKA with a dorsum foot abscess and cellulitis (Fig. 1A). Broad-spectrum antibiotics, fluid–electrolyte resuscitation, and insulin infusion were initiated, followed by prompt debridement. Over days, a clear demarcation of dry gangrene (Fig. 1B) evolved in the 2nd–3rd toes (UT3D). After sepsis control and basal–bolus transition, wound bed optimization enabled limb-sparing surgery: 2nd MTP disarticulation and 3rd distal phalanx amputation with split-skin grafting over a clean, vascularized bed after one week (Fig. 1D). Postoperative chlorhexidine dressings supported full graft take and complete healing by eight weeks (Fig. 1E). This outcome was enabled by tight coordination between endocrinology, infectious diseases, plastic surgery, nursing wound care, and rehabilitation.

Aggressive, protocolized care—early antibiotics, intensive glycemic optimization, decisive source control, and timely coverage—can salvage the limb in diabetic foot sepsis even without macrovascular disease¹. Multidisciplinary teamwork streamlines staging, offloading, dressing selection, and surgical timing, minimizing tissue loss and restoring function.

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Figure 1: (A) Right foot cellulitis with necrotic tissue on the dorsum of foot at presentation (B) Demarcated dry gangrene of the 2nd and 3rd toes (UT3D) due to septic emboli (C) Clean, granulating ulcer on day 20 after initial source control. (D) Postoperative day 5: split-skin graft over dorsum; 2nd MTP disarticulation and 3rd distal phalanx amputation. (E) Complete healing with full graft take at 8 weeks.