

External Fixator: The Answer To Complex Diabetic Foot Ulcer

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INTRODUCTION:

Severe diabetic foot infections associated with vascular insufficiency and charcoat instability has long been a recipe for amputation¹. The threshold for these devastating procedures are low, with the justifications of faster recovery and supposedly better outcome. We however present a case where an amputation was the treatment of choice but decided on a limb salvage procedure with external fixator in view that patient was young and previously active.

MATERIALS & METHODS:

Our patient is a 34 years old male who presented with severe mid foot infection and destruction. The infection was unable to be contained despite performing multiple wound debridement, multiple antibiotic therapy and prolonged hospital stay. Decision was made for a below knee amputation but the patient requested that we try all alternatives before proceeding with the procedure.

RESULTS:



Figures A: images and X Ray of right midfoot pre-external fixator application.



Figures B: images and X Ray of right midfoot pre-external fixator application. Improvement of the wound visualize.

With careful planning, a meticulous wound debridement and an ankle spanning external fixator was applied. The wound was dressed diligently and culture based antibiotic therapy, the infection was controlled and after 8 weeks,

the wound improved and the external fixator removed successfully with a stable functional painless foot for ambulation achieved.

DISCUSSIONS:

The spectrum of disorder comprising immunopathy, vasculopathy, neuropathy and arthropathy in a diabetic foot disorder makes it a very difficult problem to solve. Traditional 4D indication for amputation (Dead, Dying, Dangerous, Damn Nuisance)² are derived for purpose of uncomplicated simplified healing of the disorder to allow early return of function to society. As it may hold true for older patients, prosthesis never function equally well in high demanding young active individuals. A salvage procedure is an option often disregarded in view of the time, cost, and the unpredictability of the outcome.

Rigid stability with external fixator allows microvasculature to return and grow to provide the necessary nutrients for healing as well as adequate penetration of systemic antibiotic deliverance.³ This effectively allows eradication of infection, wound healing and stiffness of the foot in functional position to enable stable painless ambulation.

CONCLUSION:

With proper patient selection, thorough debridement, accurate antibiotic therapy and rigid immobilization with an ankle spanning external fixator has been proven to provide a good healing outcome of these complicated diabetic foot disorders.

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