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Quick healing of a neuropathic diabetic foot ulcer after resection-arthroplasty in a case of a patient incompliant with off-loading

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A 63-year old woman presented to our clinic with a neuropathic plantar foot ulcer at the third metatarsal phalangeal joint (MTP) in May 2007. She had a known history of diabetes mellitus type 2 since 1980. Her blood glucose levels were unstable, attributed to her poor living habits and self-care. She also had diagnoses of hypertension, retinopathy and severe foot deformities. Treatment options to offload the ulcer with a total contact cast or MABAL-shoe were rejected by the patient. An adapted shoe and offloading with felt were a compromised agreement. The patient was not fully compliant with the adapted footwear, which prevented wound healing. The wound was still not healed after one year, and surgical resection-arthroplasty of the MTP3 was proposed. She accepted, and the ulcer closed within two months after surgery. Two years later, the patient returned with a new neuropathic ulcer on the plantar foot, this time at the level of the second MTP. Even now she didn't agree with offloading through a MABAL-shoe or total contact cast. Therefore, wound healing was again delayed, and resection-arthroplasty of MTP2 was proposed, accepted and performed. However, the wound did not heal this time. An X-ray showed the presence of air in the foot, and probing to the bone was possible. Antibiotic treatment (clindamycine and ciproxine) followed, with no positive effects. Re-exploration was performed, in combination with offloading through a MABAL-shoe. One week later, the patient returned and complained about the MABAL-shoe. She also indicated that 'my foot doesn't feel right'. As clinical signs indicated the wound was healing properly and no signs of infection could be found, no action was taken. Another three weeks later, she returned with a systemic infection and a swollen and red forefoot. An abcess was found, that was quickly drained. Further treatment consisted of the same antibiotics. One month later, the plantar ulcer was completely healed. Two clinical lessons can be learned from this case. First, surgical resection-arthroplasty can be a good alternative for offloading (and healing) of a neuropathic plantar foot ulcer, especially when compliance with offloading is not optimal. Second, even though complications after resection-arthroplasty are rare, one should be aware of complications. Timely re-intervention is desirable and likely to be successful.