

Weight Loss Surgery is Not a Cure for the Neuropathic Foot – 2 Cases

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Background: Neuropathic foot ulcers occur due to trauma as a result of the combination of shear stress and pressure. Pressure, the force applied to a unit area of surface, is therefore increased in people who are overweight or obese. Obese individuals experience a combination of effects – namely that their size often limits their mobility, and thus their feet may not be exposed to high pressures very often, but when they do walk, the pressures may be very high – increasing their risk of ulceration. Obese individuals are often not able to self care due to their inability to reach their feet, thus further increasing their risk of developing foot problems. Previous work has shown a relationship between a high BMI and diabetes associated foot morbidity¹. What is not yet known is if existing foot pathologies get better with substantial weight loss. We present 2 cases where foot pathology deteriorated, despite significant weight loss and improved glycaemic control after bariatric surgery

Case 1: A 49-year-old woman with a 12 year history of type 2 diabetes lost 40 Kg after weight loss surgery. Her HbA1c dropped from 7.6% (60 mmol/mol) pre-operatively, to 6.4% (46 mmol/mol) post-operatively. As a result of this she had managed to stop her glucose lowering medication. Prior to weight loss surgery she had undergone a surgical debridement and excision of a pyogenic granuloma on the left foot (Figure 1). Shortly after weight loss, she developed osteomyelitis of her left second toe which necessitated a ray amputation (Figure 2). 3 months later she attended with ulceration to her left first toe and a local amputation carried out 2 months after presentation due to osteomyelitis (Figure 3). A further 3 months later she was readmitted with a swollen left foot with fracture of her third metatarsal and wound on her fourth toe (Figure 4). She elected to have a left BKA



Figure 1



Figure 2



Figure 3



Figure 4

Case 2: A 40-year-old male with a 10 year history of type 2 diabetes lost 45 Kg after weight loss surgery. His HbA1c fell from 7.6% (81 mmol/mol) to 6.6% (49 mmol/mol). As a result he managed to come off his basal bolus insulin regimen, however, he remained on metformin. 14 months after his weight loss surgery he underwent surgical debridement of a right foot ulcer (Figure 5). 1 month later, a right Charcot joint was suspected and he went into a total contact cast. However, adherence with the cast was poor and he came out of this opting to use a removable walker instead. Disappointingly, his activity increased and he developed a plantar wound (Figure 6). He refused to consider another total contact cast – indeed he went abroad travelling with this wound. Unsurprisingly, his foot deteriorated. He eventually elected to have a BKA. We felt his foot was salvageable with optimal offloading. However, despite our protestations he felt this was the best solution.



Figure 5

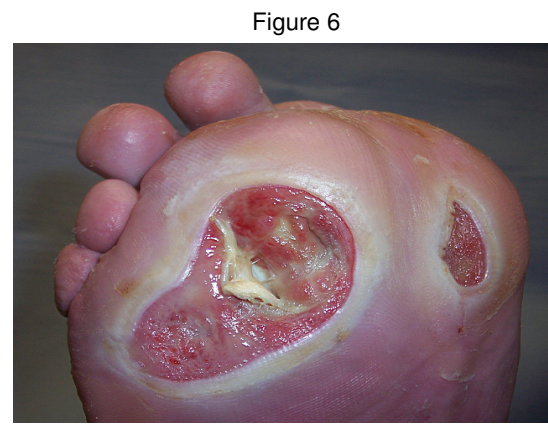


Figure 6

Discussion: Both patients lost over 30% of their initial body weight yet still developed significant foot problems, despite substantial glycaemic improvement. Both patients had dense peripheral neuropathy with good pulses. We suggest that the increased mobility they enjoyed due to weight loss surgery led to their new foot pathologies and ultimately contributed to their amputations.

1. Pinzur M et al Foot and Ankle Int. 2005;26(5):375-377