Functional Impairment of Patients Undergoing Surgical Correction for Charcot Foot

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Introduction/Purpose: Investigations using the Medical Outcomes Study Short Form 36 Healthy Survey (SF-36) and the American Orthopaedic Foot and Ankle Society Diabetic Foot Questionnaire (AOFAS-DFQ) have demonstrated a poor quality of life in patients with Charcot Foot arthropathy. The Short Musculoskeletal Function Assessment (SMFA) questionnaire has been widely used in patients with a broad range of musculoskeletal disorders.

Methods: Twenty-five consecutive patients undergoing surgical correction for diabetes-related Charcot Foot Arthropathy of the midfoot completed the Short Musculoskeletal Functional Assessment (SMFA) prior to undergoing surgery. There were 16 males and 9 females. The average BMI was 37.35 (range 25.83-50.22), and the average Hemoglobin A1C was 7.54 (range 5.3-10.1) prior to surgery.

Results: All twenty-five patients exhibited significant impairment in all six domains of the SMFA (p<0.0001) as compared to the normative data. There was a high correlation between each of the six domains of the SMFA, even after correcting for BMI.

Conclusion: Charcot foot severely impairs quality of life in impacted patients beyond the impact of morbid obesity. This impairment equally impacts all of the functional and emotional domains measured with the SMFA as compared with population norms. This investigation provides an excellent benchmark for measuring the impact of surgical correction. In addition, the SMFA appears to be a valid tool for evaluating this complex patient population.