



# Rehabilitation of Fractures in Hungry Bone Syndrome: A Case Report

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## Introduction

•This clinical case report highlights a patient who experienced Hungry Bone Syndrome that led to multiple fractures and specifically explores the acute rehabilitation course of the patient. Hungry Bone Syndrome is a unique consequence of parathyroidectomy and presented a significant surgical complication that Physiatrists must understand. In a study of 148 dialysis patients who underwent parathyroidectomy, 20% of the patients met the criteria for Hungry Bone Syndrome.

## Case Description

The patient was a 34 y/o African American male who presented to the acute hospital after significant spasms from hypocalcemia during dialysis. The severe spasms caused bilateral intertrochanteric hip fractures and a right-sided proximal humerus fracture.

The patient has a history of hypertensive nephrosclerosis that led to ESRD. The patient developed secondary and tertiary hyperparathyroidism due to the ESRD. After a surgical referral, the patient eventually had his parathyroid gland removed. After the procedure, the patient developed Hungry Bone Syndrome. In Hungry Bone Syndrome, after the body experiences a sudden drop in parathyroid hormone from parathyroidectomy, the bones resorb calcium from the bloodstream, leading to hypocalcemia. The hypocalcemia led to severe muscle spasms, which caused his right humeral fracture and bilateral intertrochanteric hip fractures. The patient had an open reduction internal fixation of the hip fractures and had his right humerus immobilized and treated conservatively.

The patient then presented to the acute rehabilitation hospital for recovery. The patient was weight-bearing as tolerated in the lower extremities and left upper extremity and non-weight bearing on the right humerus. His left upper extremity weight-bearing precaution was from a previous osteoporotic fracture. He was initially unable to perform physical therapy due to excess pain and needed an adjustment in pain medication. After better pain control with opiates, counseling, and spasm dampening by calcium control, he was highly motivated and able to tolerate therapy. The patient was initially max-to-dependent for activities of daily living and mobility. When he was discharged, he was sent home at Mod I to CGA level and went to live with only his mother's assistance. At one month follow up, the patient was doing well, 100% independent with ADLs and increasing ambulation without the use of a device.

## Discussions/Conclusions

The objective of this clinical case report is to show the uniqueness of rehabilitating fractures in patients with end-stage renal disease complicated by Hungry Bone Syndrome. This case highlights that multidisciplinary pain control and electrolyte correction in these patients is critical for proper rehabilitation.

## References

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