CHRONIC MUSCULOSKELETAL PAIN IN MULTIPLE ENDOCRINE NEOPLASIA TYPE 2B

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INTRODUCTION

Multiple Endocrine Neoplasia Type 2B (MEN2B) is an extremely rare disorder with life-threatening neuroendocrine tumors and other clinical features. This case highlights a 51-year old female with MEN 2B and the acute and chronic pain management challenges seen from joint hypermobility in MEN 2B. We emphasize the need for interdisciplinary management to address the musculoskeletal pain of MEN 2B.

CASE PRESENTATION

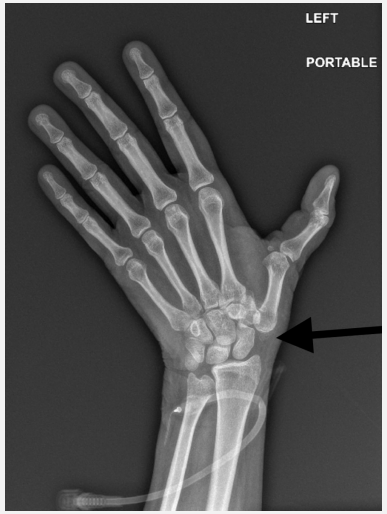
A 51-year old female with MEN 2B presented to an acute inpatient rehabilitation hospital following a left patella fracture secondary to severe joint hypermobility. Her joint hypermobility had led to recurrent dislocations, fractures, and chronic pain, with 12 prior orthopedic surgeries. Imaging obtained demonstrated the consequences of her severe joint hypermobility, including chronic joint dislocations, non-healing fractures, and severe osteoarthritis. Prior to the acute fracture she had been placed on a complex pharmacologic pain regimen shown here by her community pain physician. Following her acute injury, she also required hydrocodone 2 mg IV every 2 hours as needed. Administration of IV hydrocodone caused diffuse skin pruritis, necessitating daily diphenhydramine. She had a history of chronic constipation dating to childhood. During her inpatient rehabilitation stay, a multidisciplinary approach was implemented to manage her pain and medical issues. This included physical therapy, occupational therapy, endocrinology, and pain psychology. She had improvements in her pain levels and functional mobility. She was weaned off IV hydromorphone. A comprehensive rehabilitation approach that focused on range of motion, strengthening, functional mobility, conditioning, and endurance allowed the patient to make gains in her functional levels. She was initially substantial/maximum assist for walking 10 feet and for bed to chair transfers on admission. Following her course in inpatient rehabilitation after 2 weeks, she was able to ambulate 175 feet at an independent level with a front wheel walker and advanced to independent in all domains such as walking 10 feet on uneven surfaces. In outpatient physical therapy she participated in a customized graduated exercise protocol to treat joint hypermobility pioneered by Kevin Muldowney, PT. Functional benefits included that 3 months later she was walking independent without any adaptive equipment. She reported pain improvements in all major joints affected by chronic pain.

PAIN MEDICATION REGIMEN

Drug	Dosage	Route	Timing
Methadone	7.5mg	oral	2x/day
Oxycodone IR	27.5mg	oral	Daily at 0900
Oxycodone IR	30mg	oral	2x/day- at 1200 and 2000
Oxycodone IR	37.5mg	oral	Midnight
Carisoprodol	350mg	oral	4x/day
Hydromorphone	2mg	IV	Every 2 hours as needed

MME 392 MME/Day

IMAGING



Imaging obtained during her acute rehabilitation stay and follow up demonstrated severe bone and joint changes from trauma related to hypermobility and osteopenia. This image It demonstrates chronic dislocation of the first carpometacarpal (CMC) joint, a consequence of this patient's severe joint laxity.

DISCUSSION

MEN2B is characterized by a diverse array of clinical features, including marfanoid body habitus with joint hypermobility along with medullary thyroid carcinoma and pheochromocytoma. Join hypermobility can result in chronic pain. MEN2B requires an interdisciplinary team to manage the chronic musculoskeletal pain and fracture risk. Management options include a customized physical therapy plan to address joint hypermobility, interventional pain including regenerative medicine, pain psychology, endocrinology, medications, and orthopedic surgery. Patients may require opioids, which can be complicated by disease-specific chronic constipation. Addressing long-term musculoskeletal morbidities in MEN2B requires a comprehensive approach to manage chronic pain, fracture risk, and joint hypermobility. Patients will require long-term pain management care involving early physical therapy, pain psychology, and a customized treatment plan that may include injections and surgery.