

Importance of Utilizing Ultrasound for Diagnosis & Treatment of Acute RLE Pain and Foot Drop due to Peroneal Nerve Cyst

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INTRODUCTION

71-year-old male patient with PMH of knee OA and lower back pain with remote history of left sided sciatica in the past who presented with acute right sided lower extremity pain from knee to shin/ankle with associated right ankle dorsiflexion weakness. Initial visit diagnosed peroneal nerve cyst with ultrasound guidance and treated with aspiration in two different visits with 90% resolution in 3 weeks. Our case proves the importance of utilizing point of care ultrasound exam for diagnosis and treatment of peripheral nerve pathologies such as ganglion cyst in timely manner with full recovery of the nerve damage resulting pain relief and motor recovery.

CASE REPORT

71-year-old male patient with PMH of knee OA and lower back pain with remote history of left sided sciatica in the past who presented with acute right sided lower extremity pain from knee to shin and ankle with associated right ankle dorsiflexion weakness started about four weeks ago. Patient denies any history of trauma to the right lower extremity. MRI of the knee a year ago demonstrated advanced tricompartmental OA with large baker's cyst in Jan, 2024. Patient was referred to our clinic for an evaluation and treatment of acute right lower extremity pain to rule out RLE radiculopathy. Patient tried anti-inflammatories, heat & ice and physical therapy with minimal relief. Physical examination demonstrated right knee varus deformity, tinel's sign was positive over peroneal nerve at the dorsal fibular head, right ankle dorsiflexion strength was 3/5, straight leg raise or seated slump tests were negative bilaterally with functional lumbar spine ROM; gait demonstrated steppage gait on the right side. Point of care limited ultrasound exam was performed and large ganglion cyst encompassing the peroneal nerve sized at 3 x 4 cm at the knee level was detected. Superficial peroneal nerve cyst was aspirated under ultrasound guidance and 3 cc straw colored dense aspirate was obtained. Patient was scheduled follow up visit in two weeks. Eleven days later, patient showed significant improvement in strength with ongoing slight numbness and electric-type pain at the right shin.

Repeat USG exam demonstrated 1 x 1 cm cyst noted around the peroneal nerve at the knee level and aspiration under USG guidance was performed which obtained 1 cc straw colored dense aspirate. Patient called the clinic a week later with 90% resolution of his symptoms.

IMAGES



Initial USG picture over fibular head.



After aspiration of 3 cc straw colored dense aspirate.



3-week post/aspiration USG picture revealing peroneal nerve.

DISCUSSION

Our case demonstrates the importance of routine thorough physical exam with the extension of USG as diagnostic tool in diagnosing a peroneal nerve ganglion cyst and treating it in timely manner with almost full recovery in three weeks. Patient could have been ordered knee and lumbosacral MRIs to rule out radiculopathy vs peroneal nerve pathologies with subsequent nerve conduction studies/EMGs which could have taken many weeks while patient is losing further muscle strength and advanced nerve damage that would have prolonged the recovery dramatically even treatment was performed at a later time. Utilizing MSK ultrasound in pain clinics is very important and useful to help patients and treat pathologies right away to provide instant relief and prevent further complications. It is also cost effective compared to MRI, NCS/EMG and further referrals such as orthopedic surgery. Our case proves the importance of utilizing USG in pain medicine practice to offer patients accurate and faster diagnosis and treatment plan.

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