Ipsilateral Lower Limb Weakness After Sarcoma Treatment: A Case Report

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Case: A 24-year-old male with worsening left foot neuropathy following chemotherapy and radiation treatment for sarcoma in the left thigh.

Background: He had previously undergone local resection of a 12cm x 8cm x 14.5cm rhabdomyosarcoma in the left vastus lateralis. He was then treated with vincristine for 40 weeks and radiation to the left lateral thigh with a maximum dose of 50.4 Gy. The sciatic nerve was outside the target area and received a lower dose. While undergoing chemotherapy, the patient experienced bilateral dysesthesias in his fingertips and feet. He had no history of neuropathy prior to treatment. After chemotherapy was completed, these symptoms subsided in all extremities except for the left foot, which developed atraumatic plantar flexion and dorsiflexion weakness, great toe extensor and flexor weakness, and decreased sensation in the distal great toe to the metatarsal.

Exam: Sensation was decreased in the left distal great toe to the metatarsal, but was otherwise intact in the lower limbs. Distal pulses were intact. Left extensor hallucis longus strength was 3/5, left extensor digitorum brevis was 3/5, left toe flexion was 3/5, ankle dorsiflexion was 4/5, and ankle plantar flexion was 4+/5. Strength was otherwise intact in the lower limbs.

Neuro Diagnostics: Electromyography and needle conduction studies demonstrated left worse than right polyneuropathy mainly affecting the tibial and peroneal motor nerves. There was no clear evidence of a single nerve compressive lesion. (Figure 1)

Imaging: Repeat scans of the left thigh showed no new lesion. (Figure 2)

Management: Treatment included physical therapy, gabapentin, and an ankle foot orthosis.

Outcome: Fourteen months after completing radiation and seven months after completing chemotherapy, the patient’s symptoms are markedly improved.

References