

Asymmetric Muscle Atrophy from Childhood Polio

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A 45-year-old Vietnamese woman presented to the emergency department reporting 4 days of vomiting, diarrhea, and epigastric pain. Other than poliomyelitis as a child, she had an unremarkable medical history. A slight left-sided limp was noted on exam. Although she was diagnosed with gastroenteritis, laboratory studies revealed her blood urea nitrogen was low, at 4 mg/dL, and her creatinine was 0.2 mg/dL, raising concern for an intercurrent abdominal malignancy. A CT scan of the abdomen and pelvis was obtained.

The CT scan did not reveal any abdominal pathology but, incidentally, showed near-complete atrophy of the left pelvic girdle and proximal femur. Specifically noted was near-complete fatty atrophy and involution of the left iliacus, piriformis, and gluteus muscles (Fig. 1). Atrophy also involved muscles surrounding the left proximal femur (Fig. 2). The CT and laboratory findings were attributed to childhood poliomyelitis. The patient was discharged home in good condition.

Poliovirus, a small RNA enterovirus, causes destruction of the motor neuron ganglia of the brain stem and anterior horn cells of the spine. Resultant Wallerian degeneration leads to muscle atrophy, as seen here.

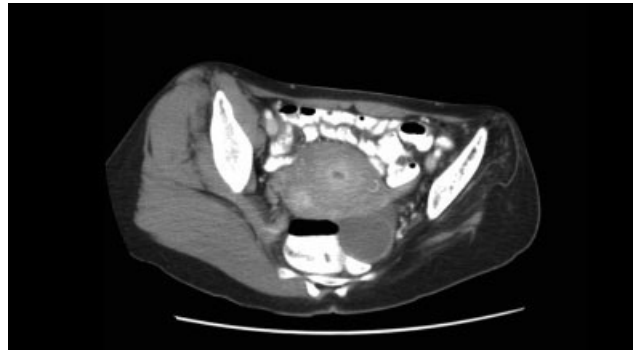


FIGURE 1. Left pelvic girdle atrophy.

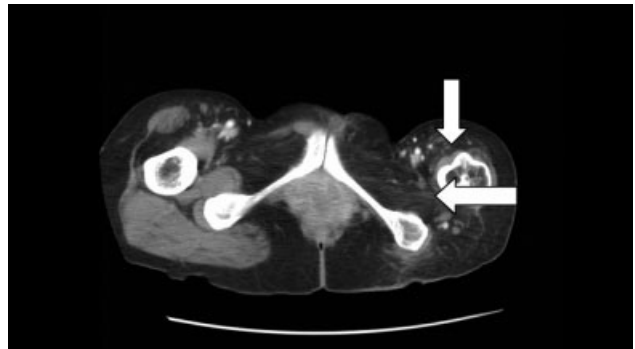


FIGURE 2. Left proximal femur atrophy.