

# Parascapular muscle atrophy as a delayed effect of radiation treatment

Shivam Om Mittal,<sup>1</sup> Bashar Katirji<sup>2</sup>

<sup>1</sup>Department of Neurology, Mayo Clinic College of Medicine, Rochester, Minnesota, USA

<sup>2</sup>Department of Neurology, University Hospitals Cleveland Medical Center, Case Western Reserve University, Cleveland, Ohio, USA

## Correspondence to

Dr Shivam Om Mittal, Department of Neurology, Mayo Clinic College of Medicine, 200 1st street SW, Rochester, MN 55902, USA; shivamomittal@gmail.com, mittal.shivam@mayo.edu

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A 73-year-old man presented to the neuromuscular clinic when his wife noted scalloping of his back muscles. He had neither noticed this muscle loss nor felt any weakness or sensory symptoms. He was treated for testicular cancer 35 years ago with abdominal surgery and had undergone mediastinal and para-aortic irradiation to treat the lymphatic spread. On examination, there was severe atrophy of parascapular muscles (figure 1). Electromyography identified severe chronic denervation of the lower trapezius, rhomboid and paraspinal muscles, with modest denervation of the glutei and spinati muscles. There were no fibrillation potentials or myokymic discharges. MR scan of the thoracic spine with gadolinium was normal with no roots or cord enhancement. Muscle biopsy from the left mid-thoracic paraspinal area showed denervation atrophy.

Radiotherapy may lead to late-onset muscle atrophy due to a myogenic or neurogenic process. Furby *et al*<sup>1</sup> described six patients with radiation-induced muscle atrophy following treatment for Hodgkin's lymphoma: two had myopathic changes, two had neuropathic changes and two had mixed changes. Bowen *et al*<sup>2</sup> described six patients treated for testicular cancer who had lower motor neurone syndromes due to anterior horn cells or nerve roots involvement. Our patient probably had a lower motor neurone syndrome due to thoracic and lumbar anterior horn cells or motor nerve root damage, as a delayed effect of irradiation. His lack of pain argued against sensory or plexus damage.



**Figure 1** The examination is notable for severe localised atrophy of lower trapezius, rhomboid and paraspinal muscles. Upper trapezius has normal bulk.

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## REFERENCES

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- 2 Bowen J, Gregory R, Squier M, *et al*. The post-irradiation lower motor neuron syndrome: neuropathy or radiculopathy? *Brain* 1996;119 (Pt 5):1429–39.



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