

# Teaching NeuroImages: Colchicine-induced vacuolar myopathy

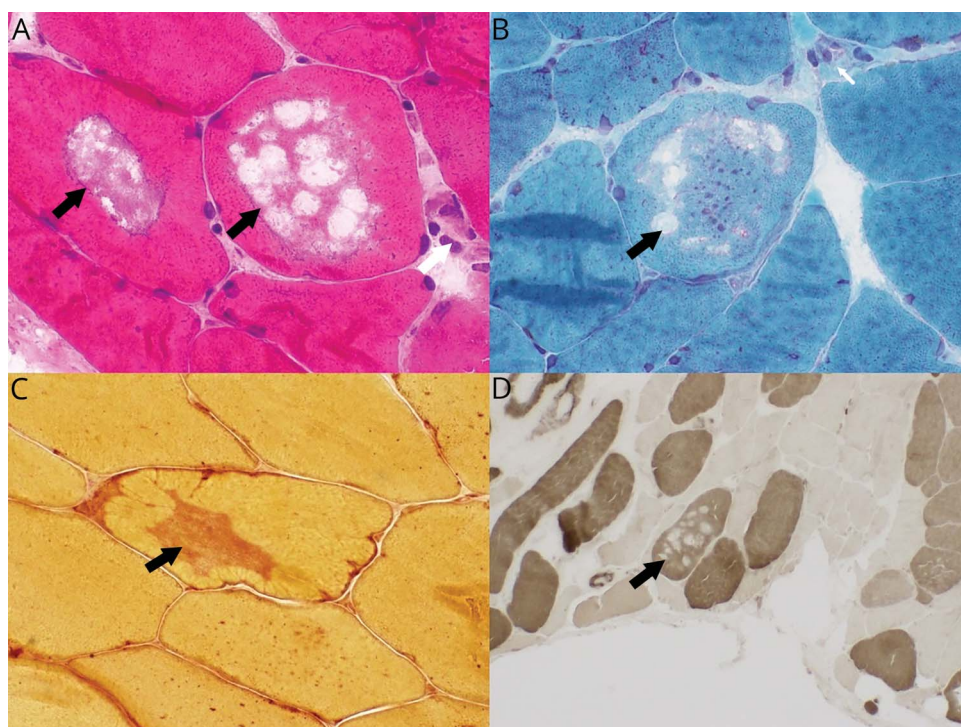
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*Neurology*® 2019;93:e2306-e2307. doi:10.1212/WNL.0000000000008636

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**Figure** Right deltoid muscle biopsy



Hematoxylin & eosin (A; 400×) and Gomori trichrome (B; 400×) sections show scattered vacuolated and occasional necrotic fibers. Esterase shows increased staining associated with the vacuoles and inclusions (C; 400×). ATPase at pH 4.3 demonstrates vacuoles restricted to type 1 fibers (D; 100×). Black arrows = vacuoles; white arrows = necrotic fibers.

An 86-year-old man presented with 1 year of insidiously progressive weakness that started around 2 weeks after colchicine initiation for gout. Examination noted proximal more than distal weakness with diffuse hyporeflexia. Creatine kinase was 3,172 U/mL and electrodiagnostic study was consistent with a myopathic process. Muscle biopsy (figure) showed necrotizing myopathy with vacuoles, as well as mild chronic denervation/reinnervation. Weakness improved after cessation of colchicine.

Colchicine disrupts the microtubules leading to defective movement of lysosomes and formation of autophagic vacuoles.<sup>1</sup> Autophagic vacuoles can also be seen with chloroquine or hydroxychloroquine therapy, acid maltase deficiency, and various other myopathies.<sup>2</sup>

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## Study funding

No targeted funding reported.

## Disclosure

The authors report no disclosures relevant to the manuscript. Go to [Neurology.org/N](http://Neurology.org/N) for full disclosures.

## Appendix Authors

Name	Location	Role	Contributions
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## Appendix *(continued)*

Name	Location	Role	Contributions
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**This information is current as of December 9, 2019**

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