RESIDENT & FELLOW SECTION

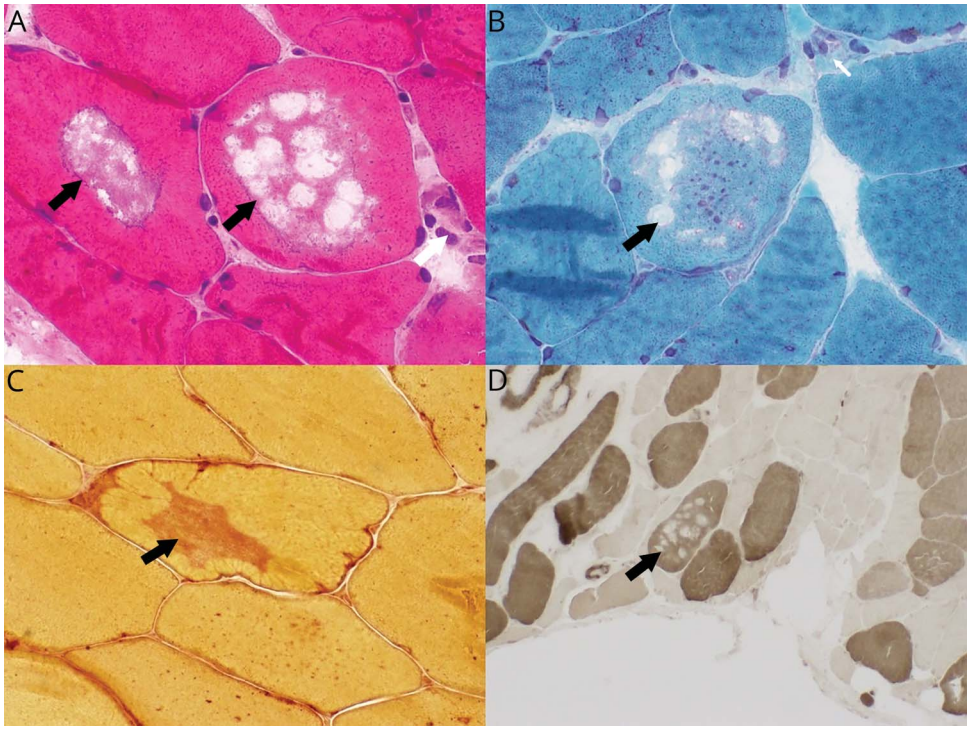
Teaching NeuroImages: Colchicine-induced vacuolar myopathy

Sri Raghav Sista, MD, Maxwell Q. Nyce, MD, Sarah E. Bach, MD, and Gregory M. Blume, MD

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

Correspondence
Dr. Sista
sri.s.raghavsista@osfhealthcare.org

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.[1] Autophagic vacuoles can also be seen with chloroquine or hydroxychloroquine therapy, acid maltase deficiency, and various other myopathies.[2]

MORE ONLINE

→**Teaching slides**
links.lww.com/WNL/B10

From the Department of Neurology, University of Illinois College of Medicine at Peoria.

Go to Neurology.org/N for full disclosures. Funding information and disclosures deemed relevant by the authors, if any, are provided at the end of the article.

Study funding

No targeted funding reported.

Disclosure

The authors report no disclosures relevant to the manuscript. Go to Neurology.org/N for full disclosures.

Appendix Authors

Name	Location	Role	Contributions
Sri Raghav Sista, MD	Peoria	Author	Study concept or design, analysis or interpretation of data, drafting/revising the manuscript for content, including medical writing for content
Maxwell Q. Nyce, MD	Peoria	Author	Analysis or interpretation of data, revising the manuscript
Sarah E. Bach, MD	Peoria	Author	Analysis or interpretation of data, drafting/revising the manuscript for content, including medical writing for content
Gregory M. Blume, MD	Peoria	Author	Analysis or interpretation of data, drafting/revising the manuscript for content, including medical writing for content

References

1. Katirji B, Kaminski HJ, Ruff RL. Neuromuscular Disorders in Clinical Practice. Berlin: Springer Science & Business Media, 2013.
2. Nishino I. Autophagic vacuolar myopathy. Semin Pediatr Neurol 2006;13:90–95.

Teaching NeuroImages: Colchicine-induced vacuolar myopathy

Sri Raghav Sista, Maxwell Q. Nyce, Sarah E. Bach, et al.

Neurology 2019;93;e2306-e2307
DOI 10.1212/WNL.0000000000008636