

# What Rhabdomyolysis Looks Like in Refeeding Syndrome?

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A 14-year-old girl was admitted to a psychiatric clinic for anorexia nervosa. After a month of successful treatment for her underlying disease, she reported pain on the left hip that increased while walking. Blood test revealed elevated creatine kinase (3650 UL; normal 30–135 UL), hypophosphatemia (1.3 mg/dL; 3–4.5 mg/dL), and hypomagnesemia (1.4 mg/dL; 1.7–2.2 mg/dL). Connective tissue disorders were ruled out by negative antibodies (myositis-specific antibodies). Ultrasound of the left hip showed focal myositis. Pelvic magnetic resonance imaging revealed involvement of several muscles (gluteus maximus, gemellus, and internal obturator) on the left side of the body, with less involvement of the contralateral side (Fig. 1). These findings suggested extensive rhabdomyolysis when recovering from anorexia nervosa.

Rhabdomyolysis has been previously described in patients with refeeding syndrome, but findings on imaging are poorly documented (1). The diversity of its clinical presentation ranges from mild to severe, hence the importance of correlating the clinical history, laboratory, and imaging findings to determine the degree of involvement (2). Ultimately, delayed diagnosis and inadequate management of this entity can lead to detrimental outcomes in patients (3).

## REFERENCES

1. Hearing SD. Refeeding syndrome. *BMJ*. 2004;328:908–909.
2. Crook MA, Hally V, Panteli JV. The importance of the refeeding syndrome. *Nutrition*. 2001;17:632–637.
3. Pulcini CD, Zettle S, Srinath A. Refeeding syndrome. *Pediatr Rev*. 2016;37:516–523.

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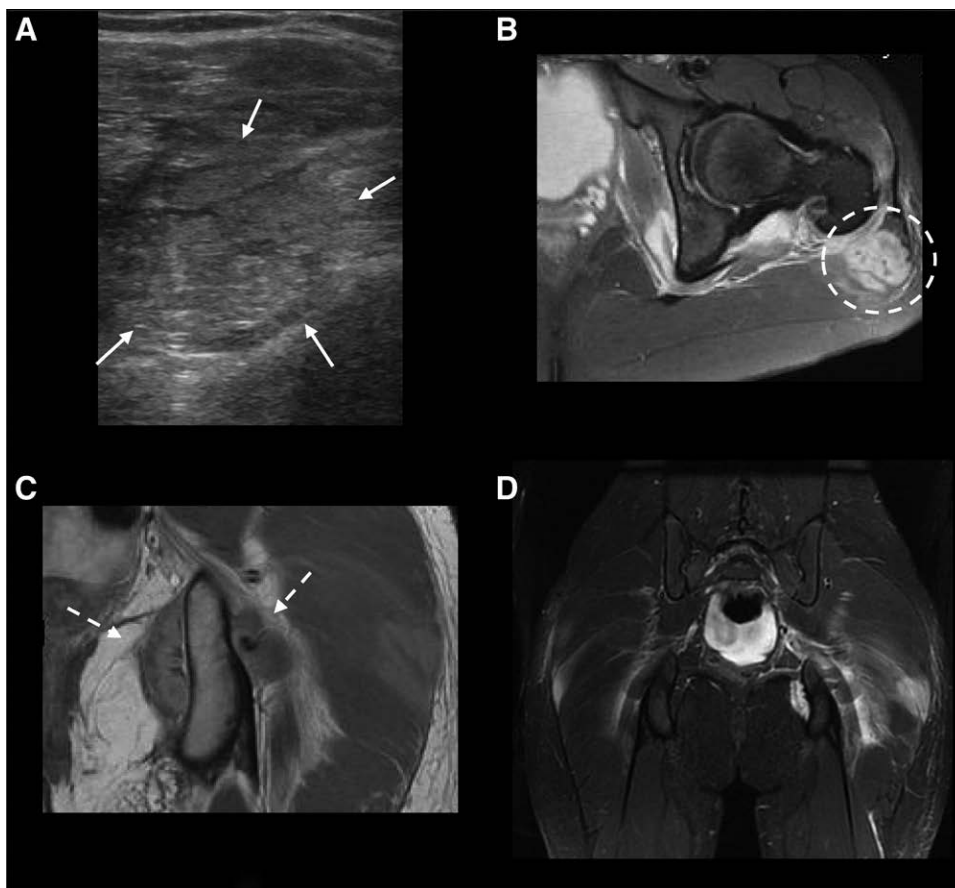
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**FIGURE 1.** Imaging findings. A, Ultrasound image shows a focal area of alteration echostructure of the left gluteus maximus (arrows). B, Axial T2 MRI image shows a rounded area of myositis in the gluteus maximus (circle) that corresponds to the image described on ultrasound. C, Coronal PD MRI image of the left hip shows involvement of other periarticular muscles (dashed arrows, internal obturator, and gemellus superior and inferior). D, Coronal STIR MRI image shows bilateral involvement of the periarticular musculature of both hips. MRI = magnetic resonance imaging; PD = proton density; STIR = short inversion time inversion recovery.