

Tanyaporn Nakornchai, MD; Apichaya Monsomboon, MD; Onlak Ruangsomboon, MD; Jirayu Chantanakomes, MD

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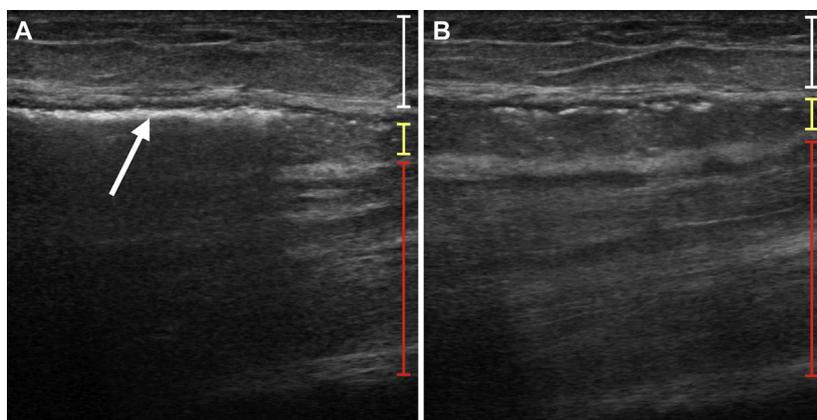
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**Figure 1.** Radiographic lateral view of the left leg, showing air in the soft tissue (arrow).



**Figure 3.** Intraoperative findings, including necrotic muscle and purulence.



**Figure 2.** A, Point-of-care ultrasonography in longitudinal view, revealing a hyperechoic line with dirty shadowing (arrow) representing air under the fascia. B, Compression of the thigh, resulting in the pushing of air out of the field, clearly showing pus under the fascia. White brackets represent subcutaneous tissue; yellow brackets, pus; and red brackets, muscle.

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A 58-year-old woman with a history of diabetes and hypertension presented to the emergency department (ED) with fever and nontraumatic left leg pain worsening for 2 days. On examination, her temperature was 38°C (100.4°F), pulse rate 140 beats/min, and blood pressure 91/52 mm Hg, and her left leg was nonerythematous but swollen and tender from the upper thigh to below the knee. The WBC count was 33,550/ $\mu$ L, with 68% neutrophils and 26% bands, and c-reactive protein level was 331 mg/L. The emergency physician obtained a radiograph (Figure 1) and bedside ultrasonography (Figure 2 and Video E1 [available online at <http://www.annemergmed.com>]) of the left thigh.

*For the diagnosis and teaching points, see page e116.*

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## IMAGES IN EMERGENCY MEDICINE

*(continued from p. e115)***DIAGNOSIS:**

*Pyomyositis.* The radiograph revealed air in the soft tissues and ultrasonography demonstrated pus inside the muscular layer. The patient received aggressive fluid resuscitation and broad-spectrum intravenous antibiotics, and underwent surgical debridement within hours. Intraoperative findings were noteworthy for extensive muscle necrosis and purulence (Figure 3). Cultures were positive for *Escherichia coli*, and she was discharged home on the 40th postoperative day.

Pyomyositis is a skeletal muscle infection in which the most common pathogen is *Staphylococcus aureus*<sup>1</sup>; however, Gram-negative bacteria should be suspected in patients with diabetes or cancer.<sup>2</sup> Although the criterion standard for diagnosis of pyomyositis is magnetic resonance imaging (MRI), ultrasonography is a useful ED tool for early detection of pyomyositis, especially in suppurative stages<sup>1,3,4</sup> or if MRI availability is limited. Patients with fluid collections require both intravenous antibiotics and surgical debridement.<sup>1</sup>

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*Author affiliations:* From the Department of Emergency Medicine, Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand.

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