

# Subungual Abscess Caused by *Staphylococcus lugdunensis*

Sital Patel, DO; Jenifer R. Lloyd, DO

## Practice Points

- An unusual organism in subungual infection points to the importance of culture.
- Symptoms may improve with drainage.

Although *Staphylococcus lugdunensis* is a constituent of the normal human skin flora, it does have pathogenic potential. Infections can range from severe (eg, endocarditis, osteomyelitis) to less invasive skin and soft-tissue infections. We report a case of a subungual abscess in a patient with *S lugdunensis* infection.

*Cutis*. 2013;92:125-126.

**S***taphylococcus lugdunensis* was first described as a member of the coagulase-negative staphylococci species by Freney et al<sup>1</sup> in 1988. Although *S lugdunensis* is part of the normal human skin flora, it does have the ability to cause serious infections, such as endocarditis.<sup>2,3</sup> *Staphylococcus lugdunensis* also can cause skin and soft-tissue infections in the groin and inguinal region as well as the lower extremities.<sup>4,6</sup> We report a case of an isolated subungual abscess caused by *S lugdunensis* without any sign of paronychia.

## Case Report

A 40-year-old woman presented to the dermatology clinic with throbbing pain and pressure in the left thumbnail of 1 day's duration. The patient reported

traumatic separation of the left thumbnail from the nail bed approximately 1 month prior to presentation. The pain was so intense that she was unable to sleep. She denied any redness or swelling in the tissue around the nail.

On physical examination, periungual erythema and swelling were not appreciated. The left thumbnail was tender to palpation. A centrally located pocket of greenish discoloration was noted beneath the nail plate. A small hole was created in the left thumbnail over the greenish area using a CO<sub>2</sub> laser at a setting of 8 W. Pus was expressed from the hole and a culture of the fluid was taken. The patient noted immediate relief of pain and pressure. The patient was put on ciprofloxacin hydrochloride (500 mg twice daily) under the impression that the offending organism was *Pseudomonas aeruginosa*. The culture came back 4 days later and was positive for *S lugdunensis*.

## Comment

*Staphylococcus lugdunensis* historically has been a cause of invasive infections including but not limited to infective endocarditis, brain abscess, peritonitis, osteomyelitis, intravascular catheter infections, and sepsis.<sup>2,7</sup> This species of coagulase-negative staphylococci usually is isolated to the groin and inguinal region as well as the lower extremities, including the web and nail bed of the first toe and the pelvic region. *Staphylococcus lugdunensis* has been reported as a culprit in cases of skin and soft-tissue infections,<sup>4,7,8</sup> which commonly manifest as abscesses on the breasts or pelvis, wound infections, and infections of the sebaceous glands.<sup>6,9</sup> A 2009 study administered in Denmark reported paronychia as a common manifestation of *S lugdunensis* infection.<sup>4</sup>

---

Both from University Hospital Richmond Medical Center, Richmond Heights, Ohio. Dr. Lloyd also is from the Department of Dermatology, Case Western Reserve University School of Medicine, Cleveland, Ohio, and Lloyd Dermatology and Laser Center, Youngstown, Ohio. The authors report no conflict of interest.

Correspondence: Jenifer R. Lloyd, DO, Lloyd Dermatology and Laser Center, 8060 Market St, Youngstown, OH 44512 (jrl@lloyd-derm.com).

Our case is unique in that the abscess showed no periungual involvement, which is contrary to expectations based on the current literature. In our case, the CO<sub>2</sub> laser was a curative and symptomatic treatment.

## Conclusion

*Staphylococcus lugdunensis* is a normal constituent of human skin flora but has the potential to cause serious infections. This organism also should be included in the differential diagnosis of minor skin infections.

## REFERENCES

1. Freney J, Brun Y, Bes M, et al. *Staphylococcus lugdunensis* sp. nov. and *Staphylococcus schleiferi* sp. nov., two species from human clinical specimens. *Int J Syst Bacteriol.* 1988;38:168-172.
2. Piette A, Verschraegen G. Role of coagulase-negative staphylococci in human disease [published online ahead of print September 11, 2008]. *Vet Microbiol.* 2009;134:45-54.
3. Takahashi N, Shimada T, Ishibashi Y, et al. The pitfall of coagulase-negative staphylococci: a case of *Staphylococcus lugdunensis* endocarditis [published online ahead of print August 8, 2008]. *Int J Cardiol.* 2009;137:e15-e17.
4. Böcher S, Tønning B, Skov RL, et al. *Staphylococcus lugdunensis*, a common cause of skin and soft tissue infections in the community [published online ahead of print February 25, 2009]. *J Clin Microbiol.* 2009;47:946-950.
5. Ling ML, Yeo M. *Staphylococcus lugdunensis*: report of first case of skin and soft tissue infection in Singapore. *Singapore Med J.* 2000;41:177-178.
6. Tan TY, Ng SY, Ng WX. Clinical significance of coagulase-negative staphylococci recovered from nonsterile sites. *J Clin Microbiol.* 2006;44:3413-3414.
7. van der Mee-Marquet N, Achard A, Mereghetti L, et al. *Staphylococcus lugdunensis* infections: high frequency of inguinal area carriage. *J Clin Microbiol.* 2003;41:1404-1409.
8. Bieber L, Kahlmeter G. *Staphylococcus lugdunensis* in several niches of the normal skin flora [published online ahead of print June 6, 2009]. *Clin Microbiol Infect.* 2010;16:385-388.
9. Kim JH, Lee JY, Kim HR, et al. Acute lymphadenitis with cellulitis caused by *Staphylococcus lugdunensis*. *Korean J Lab Med.* 2008;28:196-200.