

Blood tests can help detect presence of necrotizing soft tissue infections

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With less than half of patients with necrotizing soft tissue infections displaying the physical signs of these very serious infections, researchers have found two simple blood tests can help physicians diagnose what is commonly known as "flesh-eating bacteria," according to a study in the December issue of *The American Journal of Surgery*.

Researchers at the Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center (LA BioMed) found only 43 percent of the patients admitted to the Harbor-UCLA Medical Center's emergency department with necrotizing soft tissue infections had obvious signs of the infections: purplish-colored skin and gas bubbles beneath the skin.

In those patients who didn't display these obvious signs, blood tests that found a high white blood cell count or a low serum sodium level helped physicians determine the patients who had necrotizing soft tissue infections.

"These simple tests are helpful in excluding the possibility of necrotizing soft tissue infection," said LA BioMed researcher Christian de Virgilio, M.D., the corresponding author of the study. "Determining whether someone has a necrotizing soft tissue infection is important because acting quickly to treat these infections increases the survival chances for the patient."

Necrotizing soft tissue infections are rare and rapidly progressing processes that can lead to reported mortality rates as high as 73 percent.

Previous studies have found the best treatment is prompt surgical intervention, yet the diagnosis remains challenging. This can delay diagnosis and potentially life-saving surgical intervention.

The researchers studied 21 patients with necrotizing soft tissue infections who were admitted to Harbor-UCLA Medical Center, a large county public teaching hospital, from July 2006 to November 2007. Nine of the 21 patients had obvious signs of the infection. Blood tests found all 21 patients had either high white blood cell counts or low serum sodium levels.

"This study should alert clinicians to the fact that necrotizing soft tissue infections can be difficult to diagnose and to the value of blood tests in helping to rule out this very serious infection," said Dr. de Virgilio.

Source: Los Angeles Biomedical Research Institute

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