LETTER TO THE EDITOR

Pectoralis major pyomyositis in an 88-year-old man: Is tooth extraction bacteremia the source?

Dear Editor,

Pyomyositis is a rare and acute intramuscular abscess that always occurs in young people and is thought to be caused by transient bacteremia rather than a local extension of a contiguous infection [1,2]. In 20–50% of cases, there is a history of trauma to the affected muscles. However, the source of this bacteremia is difficult to determine [1,2].

Here, we present an 88-year-old man who had been healthy and had visited a dental clinic for a tooth extraction on June 19, 2010. The same day, he developed a severe contusion on the left side of his chest while moving a refrigerator. Thereafter, he gradually experienced increased general discomfort, especially in his left chest, shoulder, and arm. He also experienced pain, swelling, erythema, and a warm sensation in these areas. However, no prominently visible wound was observed over his chest and arm. Therefore, he was referred to our emergency room on June 26.

The patient was afebrile and had a white blood cell count of 7800/μL with band forms up to 22%. His C-reactive protein level was 274.1 mg/L, and emergent computed tomography of the chest revealed air and fluid accumulation over the left pectoralis major muscle, extending into the pleural cavity (Fig. 1A,B). The above findings suggested that the patient had pyomyositis.

Surgical debridement and drainage was immediately performed, and a large amount of pus and necrotic tissue was drained. Pus, pleural effusion, and blood culture all revealed oxacillin-sensitive Staphylococcus aureus. The patient was administered oxacillin (2 g) at intervals of 4 hours for 4 weeks, during which he underwent another surgical debridement. Thereafter, the patient regained his health and was discharged. He tested negative for human immunodeficiency virus infection.

The most common causative agent of pyomyositis is S. aureus, as in the case of our patient. Pyomyositis has been generally reported to affect mostly young men, and, according to a recent Medline search, our patient is the oldest reported case [1,2]. The etiology of primary pyomyositis remains unclear. The infection is believed to be a complication of transient bacteremia [1,2]. Generally, bacteremia develops in individuals who have undergone a dental procedure, especially tooth extraction, and can persist for a considerable period of time. Blood cultures were reported to be positive for bacteremia of 28% and 8% at 1 and 24 hours, respectively, after incubation [3]; longer periods of bacteremia are possible but have never been documented. Generally, the bacteremia caused by dental procedure involves Streptococcus spp. [4]. However, S. aureus is also one of the common pathogens of tooth extraction bacteremia and this has been reported to lead to fatal infective endocarditis [5].

Trauma to the affected muscle results in changes in the muscle structure and thus makes the individual susceptible to infection. The most common site of infection has been reported to be the quadriceps muscle. The mainstays of treatment for pyomyositis are adequate administration of intravenous antibiotics and early drainage of the abscess.

In conclusion, we present a rare case of pyomyositis. This patient may be the first reported case of pyomyositis associated with tooth extraction, and it provides some evidence of a possible cause for the development of pyomyositis.

References


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Figure 1. (A,B) Chest computed tomography transverse view showing air and fluid accumulation over the left pectoralis major muscle. (C) The patient underwent surgical debridement and drainage.