PYOMYOSITIS: AN UNSUAL MODE OF PRESENTATION IN INFECTIVE ENDOCARDITIS

María de Miguel, MD, Paloma Pulido, MD, Gonzalo Cabezón, MD, Javier López, MD, PhD, J. Alberto San Román, MD, PhD
Instituto de Ciencias del Corazón (ICICOR), Hospital Clínico, Valladolid, Spain.
Ciber de enfermedades cardiovasculares (CIBERCV).

We present a case of multiple muscle abscesses and pyomyositis complicating a methicillin-sensitive Staphylococcus aureus (MSSA) infective endocarditis (IE).

Case report
A 45-years old male with history of diabetes was admitted with generalized myalgia, asthenia and fever within the last week. No dental procedures neither intravenous drug use were referred. Physical examination showed normal central venous pressure, a systolic mitral murmur and limb oedemas. Empiric antibiotic therapy with linezolid, meropenem and amikacin was initiated.

The patient developed septic shock with multiorgan failure. MSSA strains were isolated in blood cultures, and a guided antibiotic treatment was started with intravenous daptomycin and cloxacillin. A transoesophageal echocardiogram showed an 8x8 mm vegetation in the native mitral valve and mild mitral regurgitation.

Due to persistent limb oedemas and discomfort, a magnetic resonance imaging study of lower extremities was performed, which showed large abscesses suggesting pyomyositis (Panels A, B, D and E). A technetium-99m-DPD scan was concordant with that diagnosis (Panel G). A percutaneous drainage was carried out, with abscess cultures positive to MSSA. The initial clinical evolution was favourable, with persistently negative cultures and partial resolution of the abscesses (Panels C and F). Eventually, valve perforation with severe mitral regurgitation appeared during the hospitalization, and urgent surgery with mitral valve repair and annuloplasty was successfully performed. The culture of the explanted mitral valve was positive. Antibiotic treatment was prolonged for 6 weeks. Postsurgical evolution was uneventful. After 6 months, the patient remains asymptomatic.

Discussion
Few cases of pyomyositis associated with native valve IE have been described. S. aureus was isolated in the majority, with predilection for large muscle groups. Diabetes and immunosuppression are predisposing factors and most times there are no risk procedures identifiable. Of note, our patient fulfilled all these characteristics. However, given the rarity of this complication, it was not initially suspected.

Although surgical drainage was considered, it was not performed because the abscesses were disseminated all over the body. This case highlights that this uncommon complication can be successfully treated with percutaneous drainage and antibiotic treatment.

Interestingly, the presence of normal central venous pressure in our patient ruled out right heart failure as the cause of limb oedemas and raised the...
Figure 1: Diagnostic T1 (Panels A and D) and T2 (Panels B and E) Magnetic Resonance showing large abscesses. Control images after drainage (Panels C, F and H). Technetium-99m-DPD scan (Panel G) with arm and leg abscesses.
suspicion of a peripheral cause, which was confirmed with a magnetic resonance imaging study. It is the diagnostic modality of choice, although definitive diagnosis requires culture of the abscess purulent material.

A relationship between MSSA toxin producing strains and muscle tropism has been suggested. This underscores the importance of identifying not only the etiological agent but also whether that specifical Staphylococcal clone produces the toxic shock syndrome toxin-1 to anticipate possible associated complications. In this case, the use of antibiotics protein-synthesis inhibitors would be recommended.

Funding: The authors of this manuscript declare no relationships with any companies, whose products or services may be related to the subject matter of the article.

Conflicts of interest: We all declare no conflicts of interest.

References