

# SEPTIC ARTHRITIS OF THE SHOULDER DUE TO *STREPTOCOCCUS AGALACTIAE*

S. GARCÍA, A. COMBALÍA, J. M. SEGUR

The authors report a case of septic arthritis of the shoulder-joint due to group B beta-hemolytic Streptococci (*Streptococcus agalactiae*) in a 63-year-old female patient. These germs are a major cause of meningitis and septicemia in newborns and pregnant women. In adults, men and nonpregnant women, they have been a rare cause of septic arthritis.

**Keywords :** septic arthritis ; streptococcus agalactiae.

**Mots-clés :** arthrite septique ; streptocoque agalactiae.

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## INTRODUCTION

Group B beta-hemolytic Streptococcus (*Streptococcus agalactiae*) is responsible for a wide range of pathology, especially in the newborn where it remains one of the major causes of neonatal sepsis (2, 3).

In adults, the infection is of hematogenous origin, secondary to a distant focus generally located in the genitourinary tract. The agent has been isolated from pregnant and puerperal women in whom it had caused genital soft tissue infection, sepsis, meningitis and endocarditis (1, 2, 5). Bacteremia has also been reported in patients suffering from neoplasia, diabetes mellitus, chronic hepatic diseases, those taking immunosuppressive therapy or who had undergone splenectomy (2). Joint infections are rare.

## CASE REPORT

A 63-year-old-woman, with a clinical record of lymphoproliferative syndrome and autoimmune

chronic hepatic disease complicated by hepatitis C virus infection, presented with a 4-month history of pain and limitation of motion in her left shoulder. Xray observations revealed osteolytic lesions in the head of the humerus, which was elevated, and irregularities at the lower part of the glenoid cavity (fig. 1). CT scan confirmed these findings and showed swelling of the soft tissue (fig. 2). Tectetium 99 bone scan showed increased uptake indicating a well-developed inflammatory process in the joint.

Blood analysis demonstrated erythrocyte sedimentation rate : 129 mm, hematocrit : 34%, leukocytes : 6700/mm<sup>3</sup>, and a positive serology for type C hepatitis.

The patient underwent surgical debridement, and material for bacteriological and pathological studies was obtained. The pathology report revealed a nonspecific chronic synovitis, and the culture was positive for group B, beta-hemolytic Streptococcus (*Streptococcus agalactiae*) sensitive to penicillin. Therapy was carried out with penicillin G sodium, 4 million units IV cf. 4 h. with resolution of the process. Two years later there was no evidence of infection but the patient presented global limitation of motion of her left shoulder.

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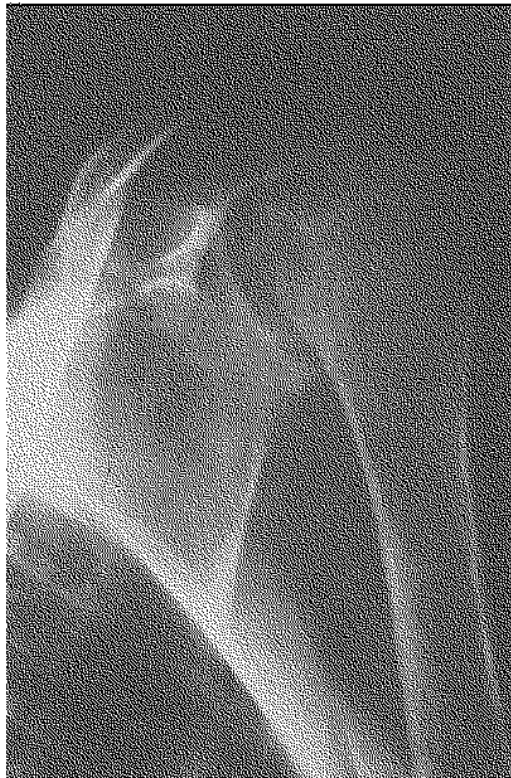


Fig. 1. — Severe destruction of the shoulder on the radiograph at the time of admission.



Fig. 2. — CT showing erosion and destructive changes of the humeral head and the glenoid.

## DISCUSSION

Group B, beta-hemolytic streptococcus (*Streptococcus agalactiae*) is a common agent of neonatal sepsis (2, 3).

Septic arthritis caused by *Streptococcus agalactiae* has increased in recent years, and similarly to other infections produced by this organism, septic arthritis presents in the form of a primary focus or occurs in the course of septicemia (4).

Adults, men and nonpregnant women, account for 68% of all infections caused by group B Streptococcus. Skin, soft tissue and bones are the most frequent sites of the lesions found in these patients (2). Old age, diabetes mellitus, neoplasia, chronic hepatic disease, immunosuppression and HIV infection are predisposing factors (2, 6). Skin and soft tissue infection often complicate decubitus and diabetic ulcers (2). Twenty-five percent of the patients with an undetected primary focus had cirrhosis or hepatic insufficiency and 20% had renal insufficiency (2).

Small (6) reported six cases of arthritis caused by *Streptococcus agalactiae*: in two of them the shoulder was affected, in three cases the infection involved a total hip prosthesis and in one case it was associated with a neuropathic arthropathy of the knee joint. The most common symptoms were fever and joint pain.

*Streptococcus agalactiae* is sensitive to penicillin, and once the precise diagnosis is made, elective therapy should be carried out with penicillin G (5). Up to 50% of these arthritis are curable with minimal joint sequelae if diagnosis is made early and the appropriate therapy is started (6). Infection due to *Streptococcus agalactiae* must be considered in the differential diagnosis in the presence of septic arthritis, especially in immunodepressed patients, for they might be seriously affected by the disease.

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#### SAMENVATTING

*S. GARCIA, A. COMBALIA, J. M. SEGUR. Septische artritis van de schouder door Streptococcus agalactiae.*

De auteurs rapporteren een geval van septische artritis van de schouder veroorzaakt door group B beta-

hemolytische Streptococci (*Streptococcus agalactiae*) bij een 63-jarige vrouw. Deze kiemen zijn een van de voornaamste oorzaken van meningitis en septicemie bij pasgeborenen en zwangere vrouwen. Bij volwassenen, mannen of niet-zwangere vrouwen, werden zij zelden als oorzaak van een septische artritis geïdentificeerd.

#### RÉSUMÉ

*S. GARCIA, A. COMBALIA, J. M. SEGUR. Artrite septique de l'épaule par Streptococcus agalactiae.*

Les auteurs rapportent un cas d'arthrite septique de l'épaule due au streptocoque bêta-hémolytique du groupe B (*Streptococcus agalactiae*) chez une patiente de 63 ans. Ce germe est responsable de méningites et de septicémies chez le nouveau-né et chez la femme enceinte. Chez l'adulte, et en dehors de la grossesse, il peut être à l'origine d'une arthrite septique.