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Letter to the Editor

Streptococcus pneumoniae *septic oligoarthritis in a patient with chondrocalcinosis: a case repor*

Oligoartritis por pirofosfato con sobreinfección por *Streptococcus pneumoniae*: a propósito de un caso

To the Editor:

Infectious arthritis produced by pyogenic microorganisms appear more frequently in patients with crystal deposit arthropathy. This makes diagnosis difficult and may on occasion delay the installment of adequate treatment.[1] The germs found more often in pyogenic arthritis are, overall, *Staphylococcus* and *Streptococcus.* However, *Streptococcus pneumoniae* is a rarely occurring germ in these cases.[2] We present a case in which the presence of pyrophosphate microcrystals and infection by *Streptococcus pneumonia* occur at the same time. The patient was an 80-year-old woman with no history of rheumatic disease, presenting acute oligoarthritis due to dyhidrate calcium pysrophosphate (DCP) with an infection by *Streptococcus pneumoniae* which led to an abscess in the external perimaleolar region of the left ankle.

The patient came to the clinic due to pain and swelling of the distal third of the left leg, ankle and knee. Arthrocenthesis yielded inflammatory synovial fluid (SF) in which DCP crystals were seen. Cultures for aerobes and anaerobes were asked for as a cautionary measure. Blood analysis showed: 9.290 leucocytes/µl (89% neutrophils, 9.9% lymphocytes); ESR: 46 mm 1st h; C reactive protein: 31 mg/dl. A chest x ray was normal. Ankle ultrasound showed a small amount of liquid in the tibioastragaline joint. In spite of symptomatic treatment the patient presented fever of 38,2 ºC and malaise. Serial blood cultures are taken and cloxacyllin is empirically started. Both the blood as well as the SF cultures yielded Gram positive, alpha hemolytic germs on blood agar, identified as *Streptococcus pneumoniae*. In spite of the correct antibiotic treatment (vancomycin, cephotaxime, ciprofloxacine), no improvement is seen in the distal third of the left leg, progressing to an abscess and requiring surgical drainage. The culture of the purulent material was also positive for *Streptococcus pneumoniae*. Subsequent debridement showed the affection of deeper planes with an alteration of the tibioastragaline joint and mechanical instability. During the following days the patient presents heart and kidney failure (urea: 105 mg/del; creatinine: 1.67 mg/dl; Na: 132 mEq/l; K: 3,3 mEq/l) and dies 17 days after the onset of the problem.

Pneumococcal arthritis represents less than 5% of septic arthritis.[3] This entity frequently appears in patients with underlying diseases such as rheumatoid arthritis, multiple myeloma, liver cirrhosis, microcrystal arthritis or advanced age[4-7] and in more than 50% of cases a respiratory or meningeal[8] infection can be identified. The joint most commonly affected is the knee.[9]

In this case the problem was oligoarticular and its uniqueness was the absence of a preceding chronic joint problem and the lack of a point of entry for pneumococcus.

We wish to emphasize the importance of suspecting infectious arthritis in patients with inflammatory joint disease and malaise. The initiation of urgent antibiotics may reduce mortality in these patients.[10] Therefore it is important to always account for the possibility that the joint affection is due to pneumococcus, even in those patients in which it seems unlikely due to prior symptoms. It is important to point to the fact that the presence of crystals in the SF does not exclude an infection. In fact, some authors have shown a temporal correlation between infectious arthritis and the liberation of microcrystals. The crystals would then be mobilized from their joint deposits by lyzosomal enzymes of polymorphonuclear leukocytes during bacterial phagocytosis. Due to this, it is always convenient to culture SF obtained and suspect the possibility of infection in patients with fever and malaise.

References

1. Shah K, Spear J, Nathanson LA, McCauley J, Edlow JA. Does the presence of crystal arthritis rule out septic arthritis? J Emerg Med. 2007;32:23-6.
2. Raad J, Peacock JE. Septic arthritis in adults caused by Streptococcus Pneumoniae: A report of 4 cases and review of the literature. Semin Arthritis Rheum. 2004;34:559-69.
3. Arranz Caso JA, López Martín JA, López Jiménez L, Moya Mir MS. Artritis por neumococo. Rev Clin Esp. 1990;186:101-2.
4. Barahona L, Soriano F, Fernández-Robles R, Granizo JJ, López-Durán JC. Artritis neumocócica bacteriémica en un hospital universitario de Madrid (1993-2003). Enferm Infecc Microbiol Clin. 2005;23:22-4.
5. Hidalgo Tenorio C, Sánchez González MD, Molina Medina A. Colecistitis y artritis séptica por Streptococcus pneumoniae. Med Clin (Barc). 2009;132:288-9.
6. Lluch MM, Fernández-Solá J, López MT, Coca A. Artritis séptica por neumococo en una paciente afectada de condrocalcinosis. Med Clin (Barc). 2004;99:118-9.
7. Dubost JJ, Soubrier M, De Champs C, Ristori JM, Sauvezie B. Streptococcal septic arthritis in adults: a study of 55 cases with a literature review. Joint Bone Spine. 2004;71:303-11.
8. Forestier E, Sordet C, Cohen-Solal J, Remy V, Javier RM, Kuntz JL, et al. Bone and joint infection due to Streptococcus pneumoniae in two inmunocompetent adults. Join Bone Spine. 2006;73:325-8.
9. González-Gay MA, Fernández B, Varela E, Jato M, Sánchez-Andrade A. Artritis séptica por estreptococo pneumoniae en artritis reumatoide. An Med Interna. 1992;9:312.
10. Ross JJ, Saltzman CL, Carling P, Shapiro DS. Pneumococcal Septic Arthritis: Review of 190 cases. Clin Infect Dis. 2003;36:319-27.

Beatriz Arca Barca,[a,*] María Guinda Giménez[b]

[a]*Reumatología, Hospital Da Costa, Burela, Lugo, Spain*
[b]*Residente Medicina de Familia, Hospital Da Costa, Burela, Lugo, Spain*

*Corresponding author.
E-mail address: beatrizarcabarca@yahoo.es (B. Arca Barca).