Letter to the Editor

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

Oligoarritis 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. The germs found more often in pyogenic arthritis are, overall, *Staphylococcus* and *Streptococcus*. However, *Streptococcus pneumoniae* is a rarely occurring germ in these cases. We present a case in which the presence of pyrophosphatase microcrystals and infection by *Streptococcus pneumoniae* occur at the same time. The patient was an 80-year-old woman with no history of rheumatic disease, presenting acute oligoarthritis due to hydrate calcium pyrophosphatase (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 1 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 cloxacillin 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, cefotaxime, 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. This entity frequently appears in patients with underlying diseases such as rheumatoid arthritis, multiple myeloma, liver cirrhosis, microcystal arthritis or advanced age and in more than 50% of cases a respiratory or meningeal infection can be identified. The joint most commonly affected is the knee.

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. Therefore it is important to always account for the possibility that the joint affection is due to pneumococccus, 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 lyosomal 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

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