

Conservative treatment may be still considered a viable therapeutic option for patients with spontaneous non-specific pyogenic spondylodiscitis. A retrospective audit study of 47 patients

Papavasiliou K¹, Panagiotidou S¹, Kakoulidis P¹, Domashenko P¹, Kenanidis E¹, Bintoudi A², Arvaniti K³, Potoupnis M¹, Sarris I¹, Tsiridis E¹

¹3rd Academic Orthopedic Department, Aristotle University School of Medicine

²Department of Radiology

³Critical Care Department

Papageorgiou General Hospital, Thessaloniki, Greece

Abstract

Background: Spontaneous non-specific pyogenic spondylodiscitis (SNPS) is a rare medical condition, whose optimal treatment remains controversial. We evaluated the multidisciplinary protocol implemented at our department for the conservative treatment of patients with SNPS.

Methods: Patients with lumbar or thoracic SNPS, whose treatment was initiated conservatively and had at least six months of follow-up, were enrolled in this retrospective audit study. Patients with specific, postoperative, or iatrogenic spondylodiscitis or necessitating immediate operative treatment were excluded. The location of the infection, initial symptoms, co-morbidities, pathogens, duration of antibiotic treatment, hospitalization and follow-up, and outcome were retrieved. The visual analogue scale (VAS) score was used to register pain improvement after treatment.

Results: Between January 2011 and December 2021, forty-seven patients (male: 26, mean age: 68.5 years) with SNPS (lumbar: 29, thoracic: 18) were hospitalized. The main co-morbidity was diabetes mellitus (23 patients). Pain was the predominant (46 patients), and fever was the second most common (19 patients) symptom. The most frequent causative microorganism was staphylococcus aureus (29 patients); no pathogen was identified in ten patients. The mean hospitalization duration for patients completing their conservative treatment (43/47) was 27 (range: 22-41) days. They received antibiotics for a mean period of 23 days intravenously (range: 21-29), 23.8 days *per os* (range: 21-35), and 46.8 days in total (range: 42-63). Conservative treatment was discontinued in two females. Two male patients died due to septic shock. The mean follow-up was 11.5 months (range: 6-15). During follow-up, no one developed any neurologic deficit and/or recurrence. There was a significant improvement in the mean VAS, from 8.3 ± 0.8 pre-treatment to 1.6 ± 0.5 at the latest follow-up ($p < 0.001$).

Conclusions: Although treatment is gradually shifting towards surgical intervention, conservative therapeutic management of SNPS patients with antibiotic administration, bed rest, and careful mobilization remains a viable and efficacious option. HIPPOKRATIA 2023, 27 (2):106-111.

Keywords: Spontaneous non-specific pyogenic spondylodiscitis, spondylodiscitis, spinal infection, infection, visual analogue scale, conservative treatment

Corresponding Author: Papavasiliou Kyriakos, 3rd Academic Orthopedic Department, Aristotle University School of Medicine, Papageorgiou General Hospital of Thessaloniki, Ring Road west, 564 03 Nea Efkarpia, Thessaloniki, Greece, tel.: +306944531188, e-mail: papavasiliou.kyriakos@gmail.com

Introduction

Spontaneous non-specific pyogenic spondylodiscitis (SNPS) is a relatively rare medical condition, usually affecting elderly men and patients with diabetes mellitus and impaired immunocompetence¹. Being more often the result of hematogenous spread^{1,2}, it may be associated with increased morbidity and long-term severe sequelae, especially in cases of delayed diagnosis and/or inadequate treatment³.

The treatment of SNPS remains controversial. Several studies favor a more “aggressive” primary surgical approach^{4,5}, involving cord decompression, debridement of infected tissues, and spinal stabilization⁶. On the other hand, conservative therapy is still considered by many to be a viable therapeutic modality⁷⁻⁹. The latter mainly consists of administering microorganism-specific antibiotics for six to twelve weeks, while critical-ill and septic patients are immediately administered with broad-spectrum