

# Reevaluation of Procalcitonin as Diagnostic Parameter for Spondylodiscitis

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# Introduction

Spondylodiscitis is usually caused by haematogenous spread of bacteria from an infectious focus at some distance from the spine or postoperative.

The diagnosis of spondylodiscitis is often prolonged. The laboratory parameters to be determined are leukocytes, C-reactive protein (CRP), and erythrocyte sedimentation rate (ESR). In patients with acute disease, there is a massive increase of the inflammation parameters and the ESR. We reevaluated procalcitonin (PCT) as a diagnostic Parameter for spondylodiscitis.



# Methods

Patients with spondylodiscitis were included in this prospective study from 01/2009 to 09/2011. ESR, CRP, leukocytes, and PCT were examined. For microbiological examination, surgery or CT-guided punctures were performed.



## Results (I/II)

23 patients were included: spondylodiscitis without infectious complication n = 19, spondylodiscitis with infectious complication n = 4. We found raised inflammatory parameters (CRP, leukocytes, ESG) in all patients with spondylodiscitis. Influenced by the therapy these parameters decreased during the observation period.

The PCT concentration was elevated (0,5 - 2,0 ng/ml) for spondylodiscitis without infectious complication in 10,5 % (2/19) and spondylodiscitis with infectious complication [\*\*] in 100 % (4/4). PCT was not elevated in n = 2 patients with infectious complications, e.g. endocarditis, clostridium difficile infection.



# Results (II/II)

highest PCT plasma concentration	< 0,5 ng/ml	17/23 (74 %)
	0,5 - 2,0 ng/ml	3/23 (13 %) [**]
	> 2,0 ng/ml	3/23 (13 %) [**]
highest CRP plasma concentration	> 5,0 mg/l	0/23 (0 %)
	5,0 - 100 mg/l	6/23 (26 %)
	> 100 mg/l	17/23 (74 %)



# Conclusion

Procalcitonin is helpful in patients with spondylodiscitis as a parameter for an infectious complication, e.g pneumonia or sepsis.

