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말기신부전환자들서 염증지표로서의 프로칼시토닌의 역할

조선대학교 병원 내과

백종훈, 김현리, 신병철, 정종훈

The Role of Procalcitonin as Index of Inflammation in End-stage Renal Disease

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Background and Objectives: Serum procalcitonin (PCT), the precursor of calcitonin, is a polypeptide of 116 aminoacid. It is measured at low level in healthy, but increased significantly in serious bacterial infection or sepsis. Although serum PCT reflects a severity of infection, it is known to be affected by some factors. Some studies show that serum PCT is increased in chronic renal failure or dialysis, without infection. In this study, we try to confirm the relevance to diagnosis of infection on end-stage renal disease (ESRD) patients with serum PCT concentration, and suggest the appropriate threshold level.

Materials and Methods: We measured the serum PCT among 21 ESRD patients who receiving antibiotic therapy due to suspected bacterial infection in our hospital. And those were compared with the concentrations of 20 ESRD patients on hemodialysis without infection sign. We calculated a receiver operating characteristic curve (ROC curve) and cut-off value to diagnose infection or sytemic inflammatory response syndrome (SIRS).

Results: Serum PCT concentrations of two groups were 0.50±0.49ng/mL and 2.95±3.67ng/mL (p=0.006), but they dose not correlate with severity. It demonstrated a sensitivity of 100.0%, specificity of 65.0% indicating infection.

Conclusion: Serum PCT is an appropriate indicator of infection in patient receiving dialysis but it may need new cut-off point.

Key Words: 프로칼시토닌, 투석, 말기신부전
Procalcitonin, Dialysis, End-stage renal failure