

“We aimed to investigate the relationship among serum NGAL levels, the inflammation markers (IL-6, hs-CRP, TNF- α) and different vascular access types used in dialysis patients.” Yigit et al (2014).

Reference:

Yigit, I.P., Celiker, H., Dogukan, A., Ilhan, N., Gurel, A., Ulu, R. and Aygen, B. (2014) Can serum NGAL levels be used as an inflammation marker on hemodialysis patients with permanent catheter? Renal Failure. Oct 27:1-6. .

Using inflammation markers in hemodialysis catheter patients [@ivteam](http://ctt.ec/dekn6+) #ivteam

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Abstract:

Background: Neutrophil gelatinase-associated lipocalin (NGAL) is a member of lipocalin family and released from many tissues and cells. We aimed to investigate the relationship among serum NGAL levels, the inflammation markers (IL-6, hs-CRP, TNF- α) and different vascular access types used in dialysis patients.

Methods: The study population included 90 patients and 30 healthy age-matched controls. The patients were divided into three groups (I, II, III) and group IV included the controls. In group I and II, the patients were with central venous permanent catheter and arterio-venous fistula, respectively. Group III included 30 patients with chronic renal failure. Hemogram, biochemical assays, ferritin, IL-6, hs-CRP, TNF- α , and NGAL were evaluated in all groups.

Results: Serum NGAL levels were markedly higher in group I than in group II (7645.80 ± 924.61 vs. 4131.20 ± 609.87 pg/mL; $p < 0.05$). Positive correlation was detected between NGAL levels and duration of catheter ($r: 0.903$, $p: 0.000$), hs-CRP ($r: 0.796$, $p: 0.000$), IL-6 ($r: 0.687$, $p: 0.000$), TNF- α ($r: 0.568$, $p: 0.000$) levels and ferritin ($r: 0.318$, $p: 0.001$), whereas NGAL levels were negatively correlated with serum albumin levels ($r: -0.494$, $p: 0.000$). In multiple regression analysis, duration of catheter hs-CRP and TNF- α were predictors of NGAL in hemodialysis patients.

Conclusion: Inflammation was observed in hemodialysis patients and increases with catheter. Our findings show that a strong relationship among serum NGAL levels, duration of catheter, hs-CRP and TNF- α . NGAL may be used as a new inflammation marker in hemodialysis patients.

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