

## Pseudo High Serum Acetaminophen Levels in CKD Patients

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**Introduction.** Due to the relatively high prevalence of acetaminophen poisoning worldwide especially in developed countries, the serum level of acetaminophen is measured by default in all poisonings of unknown origin. Patients poisoned or suspected of unknown agent poisoning sometimes also develop renal insufficiency. On the other hand the authors have observed positive serum acetaminophen level (measured in the laboratory by spectrophotometry) in some patients with kidney disease without poisoning with acetaminophen (despite the patient not taking acetaminophen). As a result, acetaminophen poisoning can misdiagnose in these patients, leading to unnecessary treatments and additional costs. Therefore, in this study, the relationship between blood urea, creatinine levels and serum levels of acetaminophen was investigated in patients with end-stage renal disease in Tabriz Sina hospital.

**Methods.** Thirty patients with ESRD (end-stage renal disease) who undergone hemodialysis, were included in the study. After obtaining informed consent, an additional blood sample of 5 cc was taken from the patients before dialysis. Supplementary and confirmatory O-Cresol diagnostic test was used to investigate that patient not taking acetaminophen. Spectrophotometric method was performed to determine the plasma concentration of acetaminophen.

**Results.** In this study, the serum level of acetaminophen with a mean of  $65.73 \pm 9.49$  micrograms/mL were high in these patients. Mean creatinine levels were  $8.83 \pm 2.74$  mg/dl and mean urea levels were  $130.67 \pm 26.78$  mg/dl.

**Conclusion.** The results showed that despite not taking acetaminophen, the serum level of acetaminophen was high in these patients. It seems that in ESRD, various toxins may interfere with spectrophotometry method and gives pseudo high levels of acetaminophen in the blood.