

P32. DIGOXIN TOXICITY AND RENAL FUNCTIONS

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Digoxin is a cardiac glycoside used to treat congestive heart failure and to slow the heart rate in patients with atrial fibrillation. Because its therapeutic effect works only within narrow window (0.5- 2.0 ng/ml), overdose occurs commonly. Therefore it is recommended to keep the upper value as 0.9 mg/dl and check regularly.

Digoxin toxicity can be caused by high dose levels. Besides low levels of potassium and magnesium is a risk factor although blood digoxin levels are in the therapeutic range. Another problem is the kidney originated digitalis accumulation in the blood.

In this study, the kidney function tests were retrospectively checked in 184 patients (98 female aged 76±9, 86 male aged 73±12 years) treated with digoxin intoxication whose blood levels were detected as >2 ng/ml. All were segregated into two groups [A(n=101), B(n=83)] based on serum creatinine levels (lower than 1.4 mg/dl and higher than 1.4 mg/dl, respectively).

In group B, digoxin and BUN correlated significantly ($r=0.322$, $p=0.003$). No significant difference was observed between digoxin levels among groups, but as expected BUN and potassium levels were different. In all, 44% of female, 46% of male patients were suffering from kidney dysfunction. A total of 14% patients were hyperkalemic (>5.5 mmol/l) and 7% were hypokalemic.

As a result, nearly half of the patients with digoxin toxicity were found as suffering from renal function reduction. Especially in the elderly patient group, digoxin blood levels have to be checked regularly and frequently.