

P31. AGE- AND SEX- RELATED RISK FACTORS FOR ELEVATED SERUM DIGOXIN LEVELS: A CROSS- SECTIONAL STUDY

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Digoxin is widely used in controlling ventricular rhythm in atrial fibrillation and in heart failure which cannot be controlled by other medications. Therapeutic levels of digoxin are 0.5- 2 ng/ml. Intoxication may occur after acute accidental or suicidal ingestion or with chronic therapy.

In this study, we aimed to find out the frequency of elevated serum digoxin levels and its association with factors of age, gender and patients' health status. A one-year (January-December 2009) cross-sectional study was performed. In total, 741 patients were included in the study. The mean (range) age was 70 (min.17, max.95) years and 565 of 741 patients were elderly (age \geq 65). The frequency of elevated serum digoxin levels was found to be 14.1% in our study population (n=103). Most of these patients were elderly (93%) and 77% of them were female. The most common diseases and symptoms in patients who had serum digoxin levels greater than 2 ng/ml were cardiovascular (atherosclerotic vascular disease, heart failure, tachycardia, bradycardia), respiratory (dyspnea, respiratory failure), urinary system and cerebrovascular diseases.

This study shows that higher serum digoxin levels are associated with older age and female gender. Increased awareness of medication safety in the elderly is important. Because the volume of distribution and renal clearance of digoxin decline with age, therapeutic monitoring is needed. Additional drugs could also increase digoxin levels and produce toxicity in elderly patients who use multiple medications concurrently. Health professionals should be more aware of these potential drug interactions, and further studies are needed on this topic.