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Evaluation of the fluorescence polarization immunoassay for quantitation of digoxin in serum.

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Abstract

Digoxin in serum was measured by fluorescence polarization immunoassay (FPIA) and by radioimmunoassay (RIA). Intraday precision of the FPIA method determined by replicate analysis of three controls (low, medium, and high) gave coefficients of variation of 5.41, 2.67, and 2.37%, respectively. The interday coefficients of variation were 5.71, 4.55, and 1.93% for the low, medium, and high controls, respectively. The mean recovery for three spiked controls was 98%. Quantitative results obtained by FPIA on serum samples from patients receiving digoxin were compared with the results obtained by RIA. The correlation coefficient was 0.989. The stability of the standard curve in FPIA was evaluated by recalibrating the instrument at two intervals, 21 days apart, and superimposing the standard curve. No significant changes were found in polarization values