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Anti-digoxin Fab fragments in cardiotoxicity induced by ingestion of yellow oleander: a randomised controlled trial. JArticle; Lancet; Vol: 355 No.(9208) 2000\_.967-72pp

Abstract :Severe cardiac glycoside cardiotoxicity after ingestion of yellow oleander seeds is an important problem in rural areas of Sri Lanka. Currently, patients must be transferred to the capital for temporary cardiac pacing. We did a randomised controlled trial to investigate whether anti-digoxin Fab could reverse serious oleander-induced arrhythmias. After a preliminary dose-finding study, 66 patients who presented to hospital with a serious cardiac arrhythmia were randomised to receive either 1200 mg of anti-digoxin Fab or a saline placebo. A 12-lead electrocardiogram, 3 min rhythm strip, and blood sample for measurement of electrolytes and cardiac glycosides were taken before treatment and at 12 timepoints thereafter. 34 patients received anti-digoxin Fab and 32 received placebo. The presenting arrhythmia had resolved completely after 2 h in 15 antibody-treated patients and two controls ( $p<0.001$ ); 24 and five patients, respectively, were in sinus rhythm at 8 h ( $p<0.001$ ). Kaplan-Meier analysis of time to first reversal showed a significant response to anti-digoxin Fab. The heart rate increased in cases, from 49.1 per min at baseline to 66.8 at 2 h, but not in controls (50.6 per min at baseline to 51.5;  $p<0.001$ ). Mean serum potassium concentrations decreased from 4.9 mmol/L to 4.1 mmol/L at 2 h in cases; no such decrease occurred in controls. Anti-digoxin Fab fragments are a safe and effective treatment for serious cardiac arrhythmias induced by yellow oleander. Their use in small rural hospitals in Sri Lanka should minimise costly transfer of patients and reduce the numbers of deaths; however, further study will be required to confirm this reduction.