

24 hours ECG Holter monitoring evaluates types of arrhythmias in accordance to type of cardiac surgery

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Introduction: Out of all patients that undergo cardiac surgery 23% have arrhythmias. 24 hours ECG (Holter) monitoring is used for differentiation of the rhythm disturbances and treatment determination.

Aim: The aim of this study was to evaluate any correlations between the type of cardiac surgery and the type of rhythm disorders following the surgery.

Materials and methods:

During 3 year period (2003 - 2006), 24 hours ECG (Holter) monitoring was indicated in all the patients that underwent any type of cardiac surgery in the special hospital for cardiosurgery "Filip II" Skopje, Macedonia and expressed an ECG rhythm disorders recognized by ECG monitoring.

Results: Seven hundred forty-eight patients underwent cardiac surgery, out of which 156 (4.8%) patients showed postoperative arrhythmia. Out of the patients that developed postoperative arrhythmias, 95 patients (61%) underwent valve surgery and 61 patients (39%) underwent bypass surgery.

The detected types of arrhythmias in patients after mitral valve surgery were: postoperative atrial fibrillation (76%), premature ventricular contractions (PVC) (8%), AV block I degree (6%), supraventricular extrasystolas (SVES) (5%), and complete AV block (5%).

The following types of arrhythmia were detected after aortic valve surgery: PVC(66%), AFF (33%) and one patient with complete AV block (1%).

A high incidence of insignificant ectopic activity: PVC (LOWN 4A and LOWN 4B), SVES; AV block I degree and short episodes of AFF was detected in patients that underwent bypass surgery.

Conclusion: 24 Hours ECG Holter monitoring is an accurate diagnostic tool in patients with different types of arrhythmias after cardiac surgery. More serious arrhythmias occur after valve surgery, especially after mitral valve surgery. Arrhythmias after bypass surgery are insignificant. In comparison to the world statistic of postoperative arrhythmias, these results suggest good surgery treatment.