

**Evaluation of predictive value of EuroSCORE  
calculated for patients undergoing coronary  
artery bypass grafting in detection of  
postoperative mortality and morbidity in  
Egyptian patients**

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# **ABSTRACT**

## **Evaluation of predictive value of EuroSCORE calculated for patients undergoing coronary artery bypass grafting in detection of postoperative mortality and morbidity in Egyptian patients**

### **Aim of work:**

The aim of the present study is to validate the applicability of EuroSCORE as a preoperative predictive scoring system of mortality and morbidity for Egyptian patients undergoing coronary artery bypass grafting surgery.

This can help to identify the preoperative risk factors that can precipitate the incidence of several postoperative complications. Indeed, this valuable information can provide the surgical team with additional information to evaluate the quality of care as well as achieving the desired improvement of medical service.

### **Patients and Methods:**

This prospective non-randomized study will include 50 ischemic patients who are candidates for isolated on-pump CABG surgery in several Egyptian cardiothoracic surgery centers after obtaining the approval of the local ethical committee.

### **Inclusion criteria:**

- 1- Age: 35-70 years.
- 2- Gender: both males and females.
- 3- Operation type: Isolated on-pump CABG.
- 4- Operation classification: elective or urgent.
- 3- NYHA classification: I-IV.
- 4- CCS angina class I-IV.
- 5- LV function: 30 - < 50 %.
- 6- Preoperative state: fair to critical.
- 7-Renal condition: Creatinine clearance < 85 ml/min. - > 50 ml/min. or regular dialysis regardless creatinine clearance.
- 8- Pulmonary condition: fair to poor.

### **Results:**

- The mean age of  $54 \pm 16$

- The study included 18 females and 32 males.
- Calculation of the value of the mean EuroSCORE that was 1.82%
- 4 patients, representing 8 %, needed prolonged ventilation up to 30 hours
- 24 patients needed inotropic support for preservation of hemodynamics
- 3 patients (6%) required IABP support with gradual weaning up to 72 hours.
- 10 patients suffered from multiple arrhythmias, with or without hemodynamic instability.
- 3 patients were complicated by postoperative myocardial infarctions
- 8 patients were detected to have variable degrees of renal impairment
- The mean length of postoperative ICU stay was  $3.56 \pm 1.53$  days The mean total hospital stay was  $9 \pm 3.096$  days
- 1 case of postoperative mortality was recorded presenting 2% of the whole study

### **Conclusion:**

EuroSCORE can be safely applied for use on Egyptian patients undergoing CABG operations, as its predictive value of mortality is accurate.

In addition, EuroSCORE has the ability to predict postoperative morbidity as well, as morbidity incidence increases in direct proportion to EuroSCORE calculated for the patients.