

CORONARY REVASCULARIZATION AND PERIPROCEDURAL MI



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1) PREOPERATIVE DATA

| Demographic | |
|------------------------|--|
| Patient ID | |
| Patient number | |
| Ethnicity | |
| Job | Unemployed Blue collar White collar |
| Educational background | No Elementary school High school University |
| Age | |
| Sex | |
| Weight and height | |
| BMI | |
| BSA | |
| Operation date | |

BMI: Body mass index; BSA: Body surface area.

| Comorbidities | |
|---------------------------------------|--|
| Diabetes mellitus | Yes/No |
| Hypertension | Yes/No No medication Monotherapy Multiple Medication |
| Peripheral vascular disease | Yes/No Iliac lesion Femoral lesion Popliteal lesion Trifurcation and after |
| Chronic obstructive pulmonary disease | Yes/No |
| Smoking history | Yes/No |
| Alcohol | Yes/No |
| Cerebrovascular disease | Yes/No With neurological deficit With out neurological deficit |
| Carotid artery disease | Yes/No Left ICA: %..... Right ICA: %..... |
| Hyperlipidemia | Yes/No |

ICA: Internal carotid artery.

| Laboratory Data | | |
|------------------------|----------------------------|-------------------|
| | Hemoglobin | ALT |
| | Hematocrit | AST |
| | Platelet | Total bilirubin |
| | WBC | Direct bilirubin |
| | CRP | Total cholesterol |
| | Albumin | LDL |
| | Potassium | HDL |
| | Sodium | Triglyceride |
| | Creatinine | HbA1c |
| | Glomerular filtration rate | BNP |
| | Troponine | BUN |

WBC: White blood cell; CRP: C-reactive protein; ALT: Alanine transaminase; AST: Aspartate transaminase; LDL: Low-density lipoprotein; HDL: High density lipoprotein; HbA1c: Hemoglobin A1C; BNP: Brain natriuretic peptide; BUN: Elevated blood urea nitrogen.

| EuroSCORE |
|---|
| https://qxmd.com/calculate/calculator_285/euroscore-ii |
| SYNTAX score |
| EuroSCORE: European System for Cardiac Operative Risk Evaluation |

| Echocardiography Data | | |
|------------------------------|----------------------------------|--------------------|
| | Ejection fraction | |
| | Left ventricular diameter | ES ED |
| | Interventricular septum diameter | |
| | Valve disease | Moderate Severe |
| | Pulmonary artery pressure | |

ES: End-systolic; ED: End diastolic.

| Pulmonary Function Test Data | | |
|-------------------------------------|-------------------|--|
| | FEV1 | |
| | FVC | |
| | FEV1/FVC | |
| | Breathing pattern | |

FEV1: Forced expiratory volume; FVC: Forced vital capacity.

2) PERIOPERATIVE DATA

| Operation Data | |
|----------------|---|
| | Cross clamp time (minute) |
| | Cardiopulmonary bypass time (minute) |
| | Type of cardioplegia Repeat interval Total amount |
| | Number of bypass grafts |

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3) POSTOPERATIVE DATA

| Laboratory Data | | |
|-----------------|----------------------------|-------------------|
| | Hemoglobin | ALT |
| | Hematocrit | AST |
| | Platelet | Total bilirubin |
| | WBC | Direct bilirubin |
| | CRP | Total cholesterol |
| | Albumin | LDL |
| | Potassium | HDL |
| | Sodium | Triglyceride |
| | Creatinine | HbA1c |
| | Glomerular filtration rate | CK-MB |
| | CK | Tropone |

ALT: Alanine transaminase; AST: Aspartate transaminase; WBC: White blood cell; CRP: C-reactive protein; LDL: Low-density lipoprotein; HDL: High density lipoprotein; CK-MB: Creatin kinaz muscle brain.



| Intensive Care Stay Duration (hour) | | | |
|-------------------------------------|--------------------------|-----|----|
| | Intraaortic balloon pump | Yes | No |
| ECMO | | Yes | No |
| VIS 1* | | | |
| VIS 2** | | | |
| Atrial fibrillation | Yes | No | |
| Acute renal failure | Yes | No | |
| Dialysis | Yes | No | |
| Cerebrovascular event | Yes | No | |
| Gastrointestinal bleeding | Yes | No | |
| Mesenteric ischemia | Yes | No | |
| Hepatocellular insufficiency | Yes | No | |
| Infection | Yes | No | |
| Length of stay (day) | | | |
| Mortality | Yes | No | |

ECMO: Extracorporeal Membrane Oxygenation; VIS: Vasoactive inotrope score; * Inotrope score when first admitted to intensive care; ** Maximum inotrope score during intensive care.

VIS: Dopamine ($\mu\text{g}/\text{kg}/\text{min}$) + dobutamine ($\mu\text{g}/\text{kg}/\text{min}$) + $100 \times$ epinephrine ($\mu\text{g}/\text{kg}/\text{min}$) + $(10 \times$ milrinone ($\mu\text{g}/\text{kg}/\text{min}$) + $10 \times$ vasopressin ($\text{mU}/\text{kg}/\text{min}$) + $100 \times$ norepinephrine ($\mu\text{g}/\text{kg}/\text{min}$).

4) DIAGNOSIS OF PPMI

| |
|---|
| According to SYNTAX criteria |
| According to ISCHEMIA criteria |
| According to SCAI criteria |
| According to EXCEL criteria |
| According to UDMI criteria |
| According to ARC-2 criteria |
| * Please check whichever of the above criteria the patient is diagnosed with periprocedural myocardial infarction (PPMI). Definitions are shown in Table 1 below. |

Table 1. Definitions of Criteria

| | Recommended criteria when preoperative cardiac enzyme is normal | Recommended criteria for preoperative cardiac enzyme elevation |
|----------|---|---|
| SYNTAX | a. Peak CK-MB / Peak CK > %10 + ECG change* b. CK-MB > ×5 URL + ECG change* | No additional criteria, same criteria apply |
| ISCHEMIA | a. CK-MB > ×10 URL + ECG change / ECHO finding** b. CK-MB > ×15 URL | No additional criteria, same criteria apply |
| SCAI | a. CK-MB > ×10 URL b. CK-MB > ×5 URL + ECG change* c. Tropoinin > ×70 URL d. Tropoinin > ×35 URL + ECG change* | a. Troponin > ×70 or CK-MB > ×10 + ECG change |
| EXCEL | a. CK-MB > ×10 URL b. CK-MB > ×5 URL + ECG change* / ECHO finding** | No additional criteria, same criteria apply |
| UDMI | a. Troponin > ×10 URL + ECG change* / ECHO finding** | a. Preoperative troponin 20% increase + >×10 URL + ECG change* / ECHO finding** |
| ARC-2 | a. Troponin > ×70 URL b. Troponin > ×35 URL + ECG change* / ECHO finding** | No additional criteria, same criteria apply |

CK-MB: Creatine kinase muscle brain; ECG: Electrocardiogram; URL: Upper reference limit; ECHO: Echocardiogram; ARC-2: Academic Research Consortium-2; * Newly developed pathological Q wave, newly developed left bundle branch block; ** Newly developed segmental wall motion defect

5) LABORATORY DATA FOR CRITERIA

| | | | |
|-----------------------------|---|---|--|
| Preop troponin | Postop 1 st hour troponin | Postop 12-24 st hour troponin | Postop 48 st hour troponin |
| Preop CK-MB | Postop 1 st hour CK-MB | Postop 12-24 st hour CK-MB | Postop 48 st hour CK-MB |
| Preop CK (Creatin kinaz) | Postop 1 st hour CK (Creatin kinaz) | Postop 12-24 st hour CK (Creatin kinaz) | Postop 48 st hour CK (Creatin kinaz) |

CK-MB: Creatin kinaz muscle brain.

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6) OTHER DATA REGARDING THE CRITERIA

| Preoperative ECG | | | Postoperative ECG | | |
|---|-------------------------------|------|--------------------------------|---------|-------------------------------|
| Rhythm: | Q wave: | STE: | Rhythm: | Q wave: | STE: |
| Preoperative Echocardiography | | | Postoperative Echocardiography | | |
| EF: | Segmental wall motion defect: | | EF: | | Segmental wall motion defect: |
| ECG: Electrocardiogram; STE: ST-elevation; EF: Ejection fraction. | | | | | |

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