ST segment Elevation Myocardial Infarction and its Invasive Management

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ST segment Elevation Myocardial Infarction (STEMI) is a major cause of cardiovascular deaths worldwide. Early recognition and prompt treatment are crucial for improving patient outcomes. STEMI is characterized by acute myocardial ischemia due to a coronary artery occlusion, leading to myocardial necrosis and stunning.

Diagnosis:
- Clinical presentation: chest pain, dyspnea, nausea, vomiting, and diaphoresis.
- Electrocardiogram (ECG): ST-segment elevation in two or more contiguous leads.
- Biomarkers: troponin T or I levels are elevated.

Treatment:
- Percutaneous coronary intervention (PCI):
  - bailout PCI: immediate angioplasty and stenting if wait time is >30 minutes.
  - rescue PCI: angioplasty and stenting if ischemia persists on catheterization laboratory admission.
- Medical therapy:
  - Antithrombotic therapy (tPA, GP IIb/IIIa inhibitors).
  - Beta-blockers, aspirin, and statins.
  - Adjunctive therapy (ACE inhibitors, ARBs).

Complications:
- Cardiac arrest.
- Hemorrhagic complications.
- Reocclusion.

Prevention:
- Lifestyle modification.
- Smoking cessation.
- Regular physical activity.
- Blood pressure control.
- Lipid management.

Conclusion:
- Timely diagnosis and treatment of STEMI are essential for preventing mortality and improving long-term outcomes.
- Early interventions can significantly reduce mortality and morbidity associated with STEMI.

References:
- ACC/AHA guidelines for the management of patients with ST-elevation myocardial infarction.
- ESC guidelines for the management of acute myocardial infarction.
تصویر ۱. الگوریتم درمان ریفروزن در بیمار مبتلا به STEMI

تصویر ۲. نمای اندورشنگری (a) قبل و (b) بعد از پیوسته کردن در آدرنال دارو

Primary PCI و (Total thrombotic cut off in LAD artery)
تصویر 3. نمای ترومبوسیوپلی کاردیوپویوتیک می‌تواند همراه با کاتر

Catheter-based تا برقراری جریان خون در رگ مسئول MI (تحت عنوان کمتر از 120 دقیقه باشد) انتقال بیمار منطقی است. ۱

References: