



THE NAMES OF **GOD**



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Paraclinic tests in AMI



Coronary angiography and angioplasty





Advantages of acute coronary angiography

- ❖ The safety and diagnostic potential of coronary angiography during the early hours of acute myocardial infarction have been reported more than 20 years ago.
- ❖ In addition to being a prelude to angioplasty, acute coronary angiography offers several advantages. Patient management after the acute event is facilitated by the knowledge of the coronary anatomy, and allows identification of a large subgroup of patients that can be discharged very early (2–3 days) after the acute event, as well as the 5–10% of patients who have an indication for elective coronary artery bypass grafting on anatomical grounds, such as left main disease and/or triple vessel disease with involvement of the proximal left anterior descending coronary artery.



Advantages of acute coronary angiography

- ❖ Some patients presenting with symptoms and signs of acute myocardial infarction should not undergo reperfusion therapy and this can only be ascertained by angiography—for example, patients with spontaneous reperfusion of the infarct related coronary artery, or patients with a cardiac event without thrombotic occlusion of a coronary artery or non-cardiac condition, that may mimic acute myocardial infarction

CORONARY INTERVENTION (ANGIOGRAPHY)

- ❖ In difficult cases or in situations where intervention to restore blood flow is appropriate, coronary angiography can be performed.
- ❖ A catheter is inserted into an artery (usually the femoral artery) and pushed to the vessels supplying the heart.
- ❖ A radio-opaque dye is administered through the catheter and a sequence of x-rays (fluoroscopy) is performed.
- ❖ Obstructed or narrowed arteries can be identified, and angioplasty applied as a therapeutic measure





INDICATION

1. Diagnosis of CAD in clinically suspected pts.
2. Providing peri-interventional information for percutaneous coronary intervention
3. Coronary anomalies
4. To exclude stenoses before non-coronary cardiac surgery (valve surgery after 40 yrs of age)
5. Determine patency of coronary artery bypass grafts

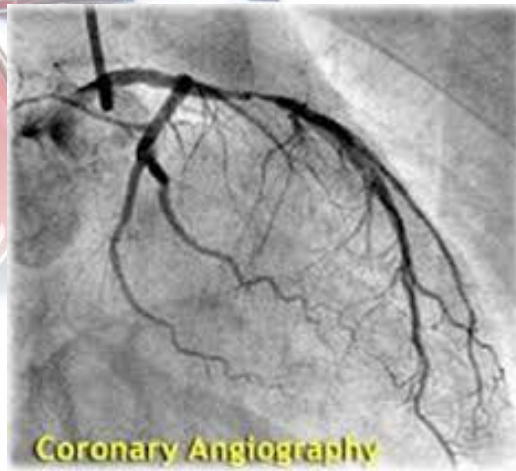
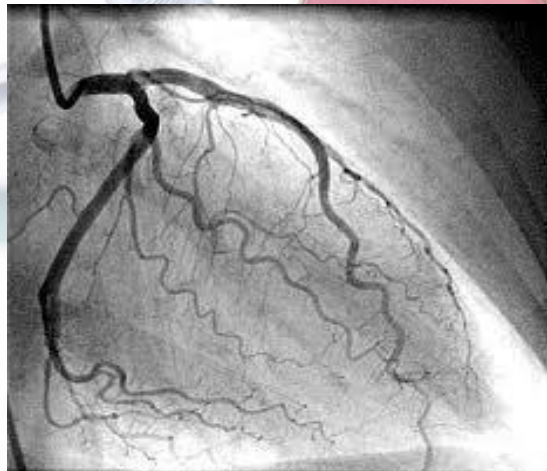
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CONTRAINDICATIONS

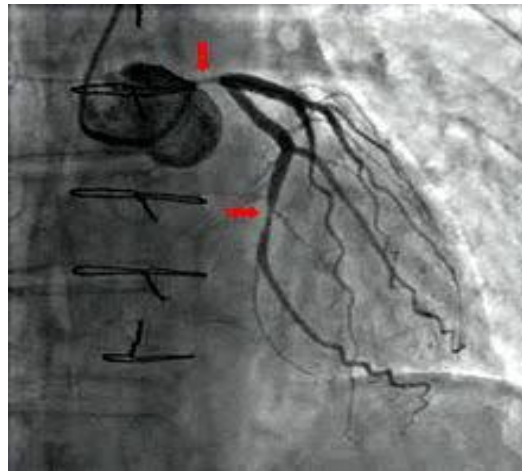
- ❖ Coagulopathy
- ❖ Decompensate congestive heart failure
- ❖ Uncontrolled Hypertension
- ❖ CVA
- ❖ GI Hemorrhage
- ❖ Pregnancy
- ❖ Inability for patient cooperation
- ❖ Active infection
- ❖ Renal Failure
- ❖ Contrast medium allergy

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Coronary Angiography



History of angioplasty for acute myocardial infarction

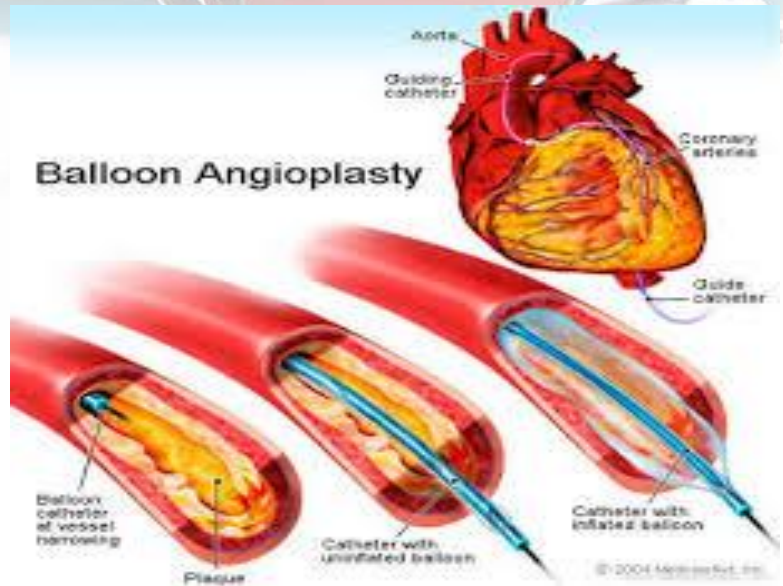


- ❖ Angioplasty for acute myocardial infarction was first described as a rescue treatment in the case of failed intracoronary thrombolysis, and was studied extensively as adjunctive therapy, performed **immediately (within hours), early (within 1–2 days), late (after two days), or elective for inducible** ischemia and/or post infarction angina, after intravenous thrombolytic treatment. Primary angioplasty, without the use of thrombolytic treatment, was described **in 1983**.
- ❖ It can be applied as an alternative reperfusion therapy in candidates for thrombolytic treatment, and is the only reperfusion option in many patients with acute myocardial infarction ineligible for thrombolytic treatment.

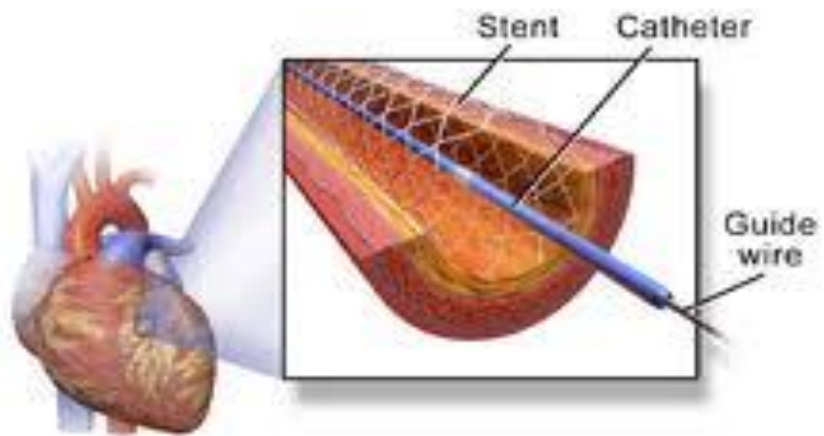
A background image showing medical equipment. On the left, a clear plastic catheter with a connector is visible. In the center, there is a red, semi-transparent circular object, possibly a stent or a catheter component. To the right, a metallic, cylindrical device with a circular opening is visible, likely a catheter or a stent component.

Primary coronary intervention (PCI): angioplasty and stenting

- ❖ PCI is the most effective alternative to reestablish blood flow to ischemic myocardium.
- ❖ Primary PCI is an invasive procedure in which the infarct-related coronary artery is dilated during the acute phase of an MI without prior administration of thrombolytic agents.
- ❖ Primary PCI may be an excellent reperfusion alternative for patients presenting within 2 hours of symptoms onset.
- ❖ Door-to-balloon time should be attained in 60 min interval



Stent in Coronary Artery



Management overview

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▶ Revascularization procedures

- ▶ Percutaneous Coronary Intervention / Angioplasty.
- ▶ Coronary Artery Bypass (CABG).
- ▶ Transmyocardial Laser Revascularization





“thank you for
your **ATTENTION**”