

Acute Coronary Syndromes

Part 1 – STEMI Infarct Location and Heart Block

Right Ventricular Infarction

Patients with inferior or right ventricular (RV) infarction often present with excess parasympathetic tone. Inappropriate parasympathetic discharge will can cause symptomatic bradycardia and hypotension. If hypotension is present, it is usually due to a combination of hypovolemia (decreased left ventricular [LV] filling pressure) and bradycardia.

- Give a careful fluid challenge with normal saline (250 to 500 mL based on clinical assessment). Repeat fluid administration (typically up to 1 to 2 L) if there is improvement and no symptoms or signs of heart failure or volume overload. Reassess the patient before *each* fluid administration. For patients with RV infarct and hypotension, volume administration may be lifesaving.

When hypotension is present, a slow heart rate is inappropriate. The heart rate should be faster in the presence of low blood pressure. The fluid bolus increases RV filling pressures, which causes an increase in the strength of RV contractions (Starling mechanism), blood flow through the lungs, and ultimately LV filling pressure and cardiac output.

AV Block With Inferior MI

Acute inferior wall myocardial infarction (usually a right coronary artery event) may result in symptomatic second-degree or third-degree heart AV with a junctional, narrow-complex escape rhythm. However, if the patient remains asymptomatic and hemodynamically stable, transcutaneous pacing (TCP) and a transvenous pacemaker is not indicated. Monitor the patient and prepare for transcutaneous pacing if high-degree block develops and the patient becomes symptomatic or unstable prior to cardiology expert evaluation.

- Heart block frequently develops from excess vagal tone and atrioventricular nodal ischemia. The patient may be stable if junctional pacemaker cells can function and maintain an adequate ventricular rate. This rhythm usually has a narrow-complex QRS and a ventricular rate of 40 to 60 per minute. Unless a large amount of myocardium is nonfunctional or comorbid conditions exist, the patient is often stable.
- If the bradycardia is symptomatic, follow the Bradycardia Algorithm.
- Prepare for TCP.
- Use atropine to increase heart rate and blood pressure if the patient becomes symptomatic. The initial recommended atropine dose is 0.5 mg IV. Avoid excessive use of atropine. Use only the dose necessary to stabilize the patient. Excess atropine may increase ischemia by increasing heart rate and contractility – major determinants of myocardial oxygen consumption.
- If there is no response to atropine and TCP, follow the Bradycardia Algorithm and consider epinephrine (2 to 10 µg/min) or dopamine

(2 to 10 $\mu\text{g}/\text{kg}$ per minute) infusion.

- The conduction defect is often transient. But you should keep TCP on standby for these patients.
- Evaluation of AV block with AMI can be difficult. Obtain immediate expert consultation for evaluation and recommendation (eg, transvenous temporary pacemaker).

Part 2—Fibrinolytic Checklist

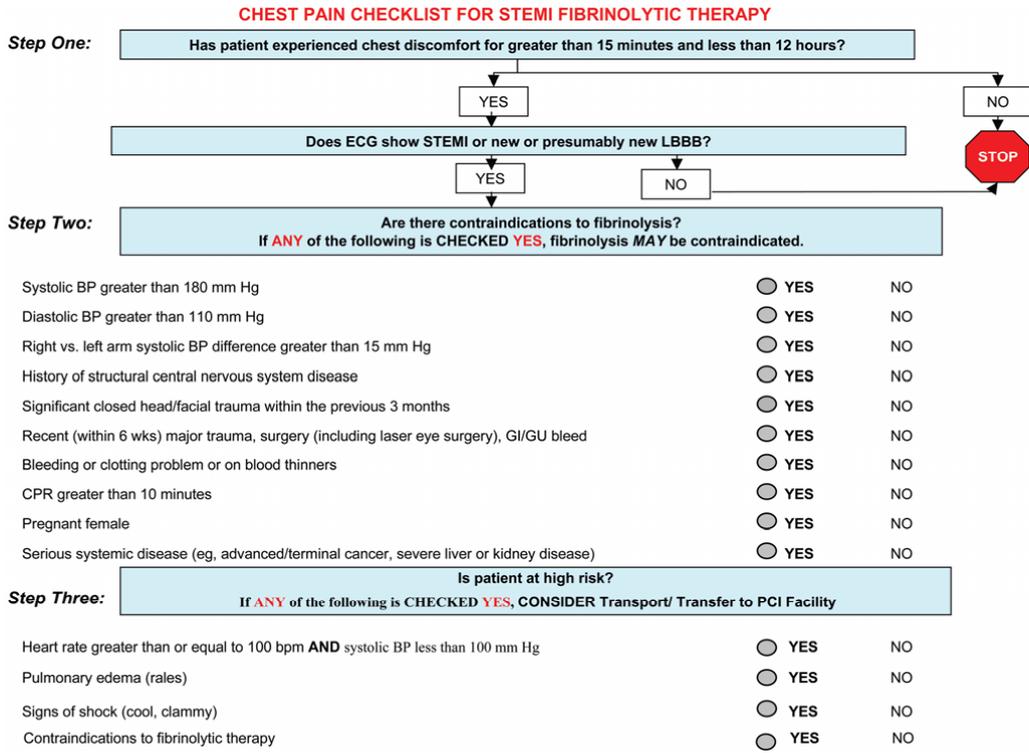


Figure 29. Fibrinolytic checklist.