

Cardiac Monitoring and Pulse Oximetry

As part of taking the vital signs, attach the cardiac monitor and pulse oximeter if you have not done so already. Use the ECG interpretation and oxygen saturation measurement just as you do other vital signs—that is, as tools to help you in your assessment and not as the only guide to treatment (treat the patient, not the monitor). Supplemental oxygen is needed for the patient in respiratory distress. However, it is not needed for patients without evidence of respiratory distress if the oxygen saturation is at least 94%. Note that very low cardiac output may lead to a failure to obtain a pulse oximeter reading; this is a good clue to check for low cardiac output. When caring for a patient in relatively stable condition who does not require rapid assessment, the physical examination may be done at this point.

Focused Physical Examination

The focused physical examination is similar for many medical patients. Nevertheless, certain aspects warrant greater emphasis in the patient whose chief complaint suggests a cardiac problem.

When observing the patient's general appearance, pay particular attention to the LOC, which is an excellent indicator of the adequacy of cerebral perfusion. If a patient is alert and oriented, the brain is getting enough oxygen, which in turn means the heart is doing its job as a pump. Conversely, stupor or confusion may indicate poor CO, which may be the result of myocardial damage or dysfunction. Skin colour and temperature are also valuable indicators of the state of the patient's circulation: The cold, sweaty skin of many patients with MI reflects massive peripheral vasoconstriction.

Physical Examination

In continuing the physical examination, begin by inspecting the neck and tracheal position. Is the trachea midline and mobile to gentle manipulation? Press down with your finger in the patient's suprasternal notch to verify that the trachea is midline.

What about the adjacent structures such as the neck veins? The external jugular veins reflect the pressure within the patient's

systemic circulation. Normally, they are collapsed when a person is sitting or standing. If the function of the right side of the heart is compromised, however, blood will back up into the systemic veins behind the right side of the heart and distend those veins. To estimate the patient's venous pressure, place the patient in a semisitting position (45° angle) with the head slightly rotated away from the jugular vein you are examining; observe the height of the distended fluid column within the vein, and note how far up the distension extends above the sternal angle.

Continue the assessment by inspecting and palpating the chest. Look for surgical scars that might indicate previous cardiac surgery. Is there a nitroglycerin patch on the patient's skin? Is there a bulge under the patient's skin indicating a pacemaker or an automated implanted cardioverter defibrillator (AICD)? These devices are implanted just below the right or left clavicle and are about the size of a one-dollar coin **Figure 27-21** ▾.

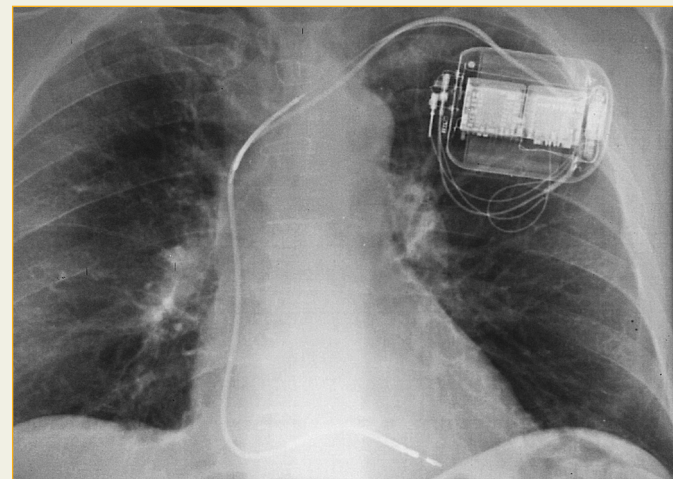


Figure 27-21 An AICD is attached directly to the heart and continuously monitors heart rhythm, delivering shocks as needed. The electricity from the AICD is so low that it has no effect on rescuers.

You are the Paramedic Part 4

Since the initial dose of adenosine caused a transient drop in the HR, you decide to administer 12 mg of adenosine after 2 minutes has passed. This time, you let Anthony know that you will be administering the medication and give it followed by a 20-ml flush. The monitor showed a 3-second period of asystole followed by a sudden increase in the HR back to approximately 210 beats/min. After waiting 2 minutes, you administer another 12 mg of adenosine, the third and final dose, with similar results.

Reassessment	Recording Time: 17 Minutes
Skin	Pink, warm, and diaphoretic
Pulse	210 beats/min; regular, with strong distal pulses
ECG	Supraventricular tachycardia
Blood pressure	104/66 mm Hg
Respirations	18 breaths/min, nonlaboured
SpO ₂	99% on nasal cannula at 4 l/min of oxygen
Pupils	Equal and reactive to light

7. How should your treatment proceed?