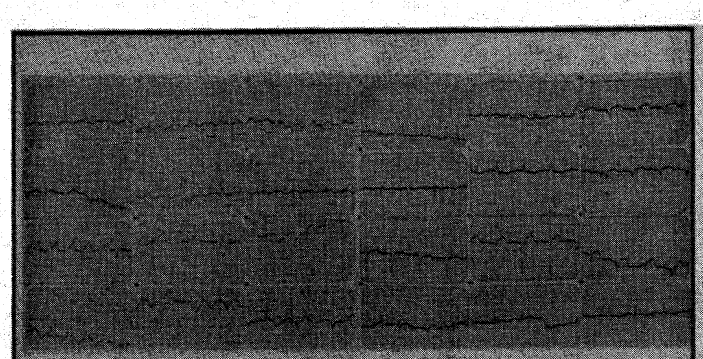

Pattern (above, left) shows paroxysmal atrial fibrillation in an 87-year-old woman. ST elevations and inverted T waves could be interpreted as myocardial ischemia secondary to the arrhythmia or, as confirmed by subsequent tracings (above, right) and enzyme determinations, to an acute anterior wall myocardial infarction.

A – For ventricular extrasystoles or ventricular tachycardias, procainamide can be given orally or intramuscularly, or lidocaine intravenously. Again, the doses should be relatively low. Excessive lidocaine or procainamide may be responsible for some of the acute confusion older people exhibit in the CCU.

If ventricular tachycardia or fibrillation develops despite these measures, emergency treatment – such as direct current countershock – can be most effective. In the event of paroxysmal ventricular tachycardia, electrical pacemaking may be the best means of control when pharmacologic methods fail. Digitalis is also indicated for some atrial arrhythmias, particularly if the patient is in heart failure.

Q – How do you manage congestive heart failure in the older patient?

A – Early signs and symptoms of congestive heart failure should be sought at each bedside visit, and therapy should be individualized and adjusted to the severity of the failure.

Q – Is sodium restriction helpful?

A – A diet that limits sodium to 1 gram or less will be beneficial to most elderly patients with acute MI. Salt restriction and diuretics should be started at the onset of pulmonary congestion. So long as the diuresis is not too rapid and electrolyte imbalance is avoided, the elderly patient usually responds well.

Q – If these measures fail, would you proceed to digitalize the patient?

A – Digitalization may indeed be helpful in treating congestive heart failure in the elderly. Their greater sensitivity to digitalis may dictate smaller doses, preferably orally, or perhaps intramuscularly, as well as observing the patient carefully for signs of toxicity. In patients with acute MI, it is best to avoid the IV route and to wait for 24 to 48 hours if possible. Otherwise, rapid administration of large doses of digitalis should be avoided, since this may provoke the onset of pulmonary edema and lead to digitalis toxicity and arrhythmias much earlier than in younger patients. It is possible to give half of an average digitalizing dose to an elderly patient and still obtain some useful inotropic effect.

Q – How do you treat shock in these patients, Dr. Harris?

A – In much the same way as in younger ones. Unfortunately the prognosis for the older patient with MI and shock is particularly poor. Devices intended to assist the circulation may improve the outlook for younger patients, but are of less value in helping the geriatric patient with acute MI.

Q – What is your usual practice with regard to anticoagulants?

A – Ordinarily, I don't give anticoagulants to older MI patients who are otherwise good risks, unless they are already on anticoagulant therapy or if they have a history of pulmonary embolic phenomena or thrombophlebitis. Even in this second group, I prefer to ambulate the patients and prevent the complications that way.

Q – You mentioned ambulating your patients. Can this usually be done?

A – I don't believe the older patient has to to be marooned in bed, especially following a small myocardial infarction. He can sit in his chair or walk around the room. This is important not only to reduce the risk of thromboembolism; older people have so much associated disease – arthritis or weakened lungs, for example – that when the physician confines them to bed, they deteriorate quickly.

Q – Do associated diseases change your treatment of the myocardial infarction?

A – Oh, yes. The real problem in treating these patients is that they have three strikes against them: the myocardial infarction, the associated diseases and the physiologic changes of the aging process itself. You might add a very important fourth factor – psychologic stress. The physician is really treating a variety of conditions.

Q – Does this lead to compromises in therapy?

A – Definitely. I've evolved what I call a goal-oriented system of managing elderly people generally. I have to find out what's more important to treat first.

Unquestionably the myocardial infarction is usually the life-threatening problem that requires priority. For example, many older people who come into the hospital with an orthopedic problem – a broken bone – may also have had an MI. In fact, the infarction may have been the reason the patient fell and broke the bone. When the MI is detected – and many of them aren't – treatment has to be directed against it first, naturally, and any orthopedic correction, which is usually aimed at preventing disability, has to wait until the MI has healed, usually three months after its onset.

Q – Does the reverse happen – another condition has to be handled before, or simultaneously with, the MI?

A – Yes. Arrythmias are actually the first priority in treatment. Or suppose you have a patient with myocardial infarction who develops a hemorrhage. The bleeding has to be treated concomitantly or the treatment for MI will fail. Giving the patient enough blood without throwing him into heart failure poses a judgment problem. How much blood do you give? How fast do you give it? These questions demand careful consideration for each patient. Shock and stroke are other conditions that must be treated immediately.

Q – What other factors have to be considered in the successful management of the geriatric MI patient?

A – I've mentioned psychologic stress. Its alleviation is especially important because older people are much less able to cope with it. Very often the infarction itself was triggered by some stressful condition.

In the coronary care unit, the stress factor increases. Older people are often frightened by all the machinery, oscilloscopes, ECG electrodes and so on surrounding them. The judicious use of tranquilizers and sedatives is therefore important, but even more so, I think, is an attitude of warm interest and reassurance on the part of the physician, nurse and staff. Indeed, this personalized support may be crucial to a successful outcome.

Answer to ECG Quiz

What's The Diagnosis?

MOST LIKELY, this patient has conduction delay above the bundle of His–Wenckebach-type A-V block, 2-1. Inferior wall myocardial infarction is represented by the deep Q waves with T-wave inversions, while the tall R waves in V_1 and V_2 indicate posterior wall myocardial infarction. The tall, peaked T waves in the anterior precordial leads suggest an acute ischemic process in the distribution of the left coronary artery. Subsequently the patient developed anterior subendocardial infarction, manifested by low-grade enzyme elevations, S-T depressions and T wave inversions in V_1, V_2, and V_3.