thrombus formation in this setting has not yet been described which is surprising because the same condition that favors thrombus formation (apical dyskinesia) is present in both myocardial infarction and prolonged myocardial ischemia. Our patient was considered to have an episode of myocardial ischemia because elevation of serum cardiac enzymes diagnostic for MI were absent, and the electrical and mechanical stunning gradually disappeared within 14 days. A further interesting point in the present case is the fact that our patient suffered an acute ischemic episode in the presence of normal major coronary arteries and ASH. Transmural infarction or ischemia can occur in patients with hypertrophic cardiomyopathy even in the absence of coronary atherosclerosis. The most widely accepted mechanism is intramural (“small vessel”) coronary artery disease which is found commonly in these patients. It is possible that our patient had primary hypertrophic cardiomyopathy and the ischemic attack could be ascribed to “small vessel” disease. Another possibility is that ASH in our patient was not a manifestation of hypertrophic cardiomyopathy but of a secondary phenomenon to his long-standing hypertension as described previously. If this were the case, the ischemic episode could be coronary spasm with prolonged stunning. A similar case report has been described recently.

Acute myocardial ischemia can cause prolonged electrical and mechanical stunning which can lead to mural thrombus formation. Routine echocardiographic studies in patients who present with severe myocardial ischemia may reveal that LV thrombus formation is not an unusual finding.

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Significance of a Curled Central Venous Catheter Tip*

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A malpositioned central venous catheter can cause constant excessive pressure on one particular area of a central vein, thus leading to perforation and hydrothorax. The following is a case report of an iatrogenic hydrothorax caused by a malpositioned central venous catheter. The subtle sign of malposition is a slightly curled catheter tip.

Hydrothorax is one of the complications of central venous catheterization; the etiology is usually perforation of one of the central veins in the thorax. Injury can occur during the process of catheter insertion. Delayed perforation can be a result of malpositioning of the catheter which causes excessive constant pressure on a particular area of the central vein. It is generally recommended that a postcatheter insertion chest x-ray examination be performed to rule out the presence of pneumothorax or pleural effusion, and to check the position of the catheter. The roentgenographic sign of malpositioning of the catheter can be as subtle as a slightly curled catheter tip. The failure to recognize this can lead to central venous perforation and hydrothorax.

Case Report

A 48-year-old woman was admitted to the hospital because of radiation enteritis as a result of receiving 5,000 rads to the whole pelvis and 4,500 rads to the paraaortic area for carcinoma of the uterine cervix. Using the Seldinger technique, a six inch, 16 gauge radiopaque polyurethane catheter was inserted via a right subclavian venous puncture into the superior vena cava for hyperalimentation. No technical difficulty was encountered during the procedure and blood could be aspirated freely from the catheter. Immediate postcatheter insertion, anterior-posterior chest x-ray film showed the catheter tip to be located in the superior vena cava, with the tip of the catheter slightly curled (Fig 1). There was no evidence of pneumothorax or pleural effusion. A 10 percent glucose solution with electrolytes was infused. The patient did well until nine days after catheter insertion when she developed right chest pain and dyspnea. Chest x-ray examination was repeated. The anterior-posterior view showed that the catheter tip was more coiled and the lateral view revealed the tip of the catheter was pointing posteriorly (Fig 2). There was also a right pleural effusion. Thoracoacentesis yielded 700 ml of straw-colored fluid with a pH 7.29, glucose value of 200 mg/dl. Serum glucose was 152 mg/dl. Microscopic examination of the thoracoacentesis fluid yielded moderate white blood cells and a few red blood cells. Culture of the fluid did not grow any organism. The central venous catheter was removed after thoracoacentesis. Ventilation-perfusion lung scan with 133Xe gas demonstrated no evidence of thromboembolic disease to the lungs. Following thoracoacentesis and removal of the central venous catheter, the signs and symptoms of pleural effusion gradually resolved.

Discussion

Complications of percutaneous subclavian catheterization include pneumothorax, hemothorax, hydrothorax, septi-
venous pressure readings; it can also lead to thrombosis or perforation of the central vein. An analysis of 13,800 subclavian catheterizations showed incorrect position of the catheter was found in 15 percent of the cases, verified with x-ray examination. Therefore, it is important to obtain a routine postcatheter insertion chest x-ray film, even if blood can be aspirated freely from the catheter, as in this case. A coiled catheter tip on an AP chest x-ray film means that the catheter tip is impinging on the vein and additional information can be obtained from a lateral chest roentgenogram. A review by Conces and Holden showed that only 1.2 percent of subclavian venous catheter placements were followed by standard AP and lateral chest roentgenogram. It should be emphasized that a malpositioned catheter tip is a harbinger of complications, and x-ray confirmation of the catheter position is mandatory following central venous catheterization.

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Hemoptysis during Sexual Intercourse*
Unusual Manifestation of Coronary Artery Disease

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Sexual activity increases physiologic demands on the cardiovascular system. A patient with stable angina pectoris experienced recurrent bouts of hemoptysis caused by left ventricular failure that occurred only during sexual activity. Severe atherosclerotic coronary vascular disease was confirmed by cardiac catheterization. The patient underwent successful coronary artery bypass grafting; nine months after surgery, he is sexually active and symptom-free.

Several studies have shown that sexual activity places increased demands on the cardiovascular system. The demands are usually modest during sexual intercourse and are less for middle-aged patients with coronary artery disease compared to young healthy laboratory volunteers. These

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FIGURE 1. Intraoperative AP chest x-ray film showing central venous catheter in superior vena cava. The catheter tip was slightly curled.

FIGURE 2. Lateral chest x-ray film, nine days later, revealing the catheter tip impinging on the posterior wall of the superior vena cava, in addition to a right hydrothorax.