False Aneurysm of the Right Atrium*

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A false aneurysm of the right atrium is described. The false aneurysm appeared after open-heart surgery and was probably related to loosening of a right atrial suture. Because of the low pressure in the right atrium, the danger of rupture seemed to be low, and conservative therapy was chosen.

False aneurysms of the heart have been reported with increasing frequency. The false aneurysm usually originates from the left ventricle. In this report, we describe a false aneurysm of the right atrium that appeared after open-heart surgery.

CASE REPORT

The patient, a 50-year-old woman without a history of rheumatic fever, was first admitted to Meir Hospital, Kfar-Saba, Israel, in 1965. Examination revealed signs of mitral stenosis and mitral insufficiency. The electrocardiogram showed atrial fibrillation and an electrical axis of −15°F. The chest x-ray film showed enlargement of the left atrium and of both ventricles. The patient refused further evaluation. After discharge, she reduced her physical activity.

In January 1975, the patient underwent cardiac catheterization and angiographic examination at another hospital. This examination confirmed the presence of stenosis and insufficiency of the mitral valve and also of mild tricuspid insufficiency. Two months later, the mitral valve was replaced with a Starr-Edwards caged-ball prosthesis (model 6320). Toward the end of the operation, after disconnection from cardiopulmonary bypass, a drop in blood pressure was recorded. Cardiopulmonary bypass was reinstituted, and the artificial valve was checked. The valve was found to operate adequately; the heart and chest were closed without any further complication. The patient was discharged on anticoagulation therapy. Subjective improvement followed the operation.

Twenty months later, the patient was admitted to Meir Hospital because of complaints of fever and cough. On clinical examination, normal heart sounds and normal sounds from the artificial valve were heard. There was a blowing apical systolic murmur, which was also audible at the left sternal border. The murmur was not holosystolic; there was no appreciable increase in the murmur at inspiration. A chest x-ray film demonstrated an oval-shaped shadow adjacent to the right cardiac border (Fig 1). Proteus mirabilis was grown on cultures of sputum. The patient’s condition improved rapidly with treatment with gentamicin.

The opacity along the right cardiac border was thought to be related to the open-heart surgery; therefore, an angiographic study was done. After injection of contrast material into the superior vena cava, a small jet was seen, which leaked from the right atrium, progressively filling a larger

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Figure 1. Chest x-ray film, showing opacity adjacent to right cardiac border.

Figure 2. Angiocardiogram. After injection into right atrium, fine jet of contrast material leaks to false aneurysm.

DISCUSSION

Acquired aneurysms, either true or false, have been...
described mainly as originating from the left ventricle.\(^1\)

Both types of aneurysm occur in coronary arterial disease.\(^2,3\) False aneurysms also have been described after trauma, infection, and cardiac surgery.\(^4\) False aneurysm of the right ventricle is a very rare complication of cardiac surgery.\(^5\) We have been unable to find previous reports of false aneurysms occurring in the right atrium.

Perforation of the right atrium by a catheter\(^*\) or laceration due to blunt trauma\(^*\) have been reported. Rupture of the atrium after blunt trauma causes hemorrhagic shock or tamponade; early operation may be a life-saving procedure.\(^6\) Rupture of false aneurysms occurs frequently,\(^1,3\) causing sudden and sometimes unexpected death. Prevention of such rupture and of its grim outcome justifies surgical resection of the false aneurysms.\(^*\)

The false aneurysm in our patient appeared following open-heart surgery. This temporal relationship, together with the absence of infection, trauma, or myocardial infarction during the postoperative period, may suggest that the aneurysm resulted from tearing out of a suture at the site of cannulation near the venae cavae. With the pressure in the right atrium being low, the tissue forming the wall of the false aneurysm can easily prevent further bleeding. In the absence of previous experience, it is not clear if patients with a false aneurysm of the right atrium are exposed to the same danger as in false aneurysm of the other cardiac chambers. The danger of rupture in this particular case is probably small because of the low pressure in the right atrium.

Insofar as conclusions can be drawn on the basis of a single case, physical findings are not helpful in the diagnosis. Moreover, after cardiac surgery, it is necessary to be alert to unusual findings on the chest x-ray film and to bear in mind that the differential diagnosis must include an acquired aneurysm.

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Acute Miliary Blastomycosis Presenting as Fulminating Respiratory Failure*

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A patient with miliary blastomycosis had acute fulminating respiratory failure requiring prolonged external ventilatory support. Treatment consisted of antifungal chemotherapy with two drugs and administration of corticosteroids. Restrictive ventilatory impairment and exercise-induced hypoxemia persist at one year after completion of therapy.

Blastomycosis, which is usually considered a chronic, rather slowly progressive infection, may occasionally occur in a fulminant form. The literature has few reports of the acute progressive forms of blastomycosis.\(^1,3\) The following case report describes a patient with miliary blastomycosis who had acute respiratory failure.

CASE REPORT

A 52-year-old nonsmoking male farmer was referred to the Jackson (Miss) Veterans Administration Hospital in extreme respiratory distress of 24 hours' duration following treatment of symptoms of the urinary tract for several days. This regimen of treatment had included oral therapy with antibiotics and prostatic massage. Two days before admission, the patient had developed fever, malaise, dyspnea, cough, and production of sputum, with rapid progression of symptoms.

On admission, physical examination revealed an alert muscular obese man in extreme respiratory distress who was diaphoretic. The following findings were noted: pulse rate, 140 beats per minute; respiratory rate, 70/min; oral temperature, 39.4°C (103°F); and blood pressure, 130/65 mm Hg. On cardiovascular examination, there was tachycardia with a loud summation gallop rhythm, but no murmurs or rubs were present. Coarse wet rales were heard over both pulmonary fields. The findings from the remainder of the physical examination were normal.

The electrocardiogram showed nonspecific abnormalities of repolarization. The chest roentgenogram was interpreted as being consistent with pulmonary edema. Arterial blood gas levels with the patient breathing room air were arterial oxygen pressure (PaO\(_2\)) of 34 mm Hg, arterial carbon dioxide tension 27 mm Hg, and pH 7.58. Initial studies of sputum revealed no acid-fast organisms, fungal elements, or other significant flora. The hematocrit reading was 36 percent, and the hemoglobin level was 12.1 gm/100 ml. The white blood cell count was 25,600/μm, with 70 percent neutrophils, 9 percent neutrophilic band cells, and 18 percent lymphocytes. Cultures of urine showed no bacterial growth, but urinary sediment had 10 to 12 white blood cells per high-power field, a trace of protein, and rare red blood cells.

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