Ruptured Right Ventricular Aneurysm

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Citation

Abstract
Aneurysms of the right ventricle are extremely rare and salvage of the patient, once the aneurysm is ruptured is extremely rare. This case report presents a 60 years old female with ruptured right ventricular aneurysm, who had been operated for coronary artery bypass 6 months before. The patient was successfully operated and resuscitated in our hospital.

CASE REPORT
A 60 year old female patient presented with complain of chest pain (20 days), swelling over chest (10 days), and bleeding from the swelling (1 day).

20 days ago, she developed chest pain which was throbbing and gradually increasing. In addition, she gradually developed swelling over the middle upper chest. She fainted and started to bleed from the swelling and was immediately taken to a nearby hospital. Subsequently, she was primarily managed with dressing and I.V. fluids. After stabilization of her hemodynamics she was transferred to our hospital.

On arrival, she was conscious with a pulse of 86 per minute and a blood pressure of 122/86 mm of mercury. Locally, there was a 7 c.m. swelling over the upper sternum near the 2nd intercostal space slightly left to midline. The skin over the swelling was blacked with a crater in the middle with surrounding reddened edematous skin. There was no active bleeding. Clinically, there was no cardiomegaly, no abnormal heart sound and the chest was clear to auscultation.

In the past history, the patient was operated for two-vessels disease (left anterior descending diffusely diseased and right coronary artery with proximal disease. 6 months ago, she underwent coronary artery bypass grafting. Postoperatively, she did well and was discharged on the 10th day.

On admission, the hemoglobin was 7.0 gm. Complete blood count, blood sugar, renal function test, liver function test, bleeding time, clotting time, serum electrolytes were all within normal limits. Urine test (routine and micro), chest X-ray, electrocardiogram, and 2D echo were within normal limits.

The next morning, just prior to the operative procedure the patient was found collapsed in a gush of blood originating from the chest swelling. Multiple pads were applied over the defect to stop the bleeding, An I.V. line was established and patient was rushed to the operation theatre.

The patient was anesthetized and intubated. The right femoral artery and vein were exposed through vertical incisions. Both vessels were cannulated and cardiopulmonarybary bypass was instituted. The sternum was opened with help of an oscillating saw. Finger pressure over the bleeding site was continued during the whole procedure.

A bleeding aneurysm was found in the right ventricular area. The patient was cooled with profound hypothermia and circulatory arrest was achieved. The ruptured aneurysm was closed and the patient rewarmed.

On the next day, the patient was quite stable and could be weaned from the ventilator removed. A total of 17 blood transfusions were given. On the 6th postoperative day the patient developed disseminated intravascular coagulation (DIC) treated with FFP PRP. Otherwise, the patient did well. She was discharged after 3 weeks. postoperatively.

DISCUSSION
“An Aneurysm Is The Dilatation Of An Artery Full Of Spiritous Blood”
Fernel 1591

The majority of ventricular aneurysms are due to acute transmural myocardial infarction with subsequent muscle necrosis followed by scar formation. Rarely, aneurysms may follow trauma or congenital cardiac defects. There are also
false aneurysms which are due to previous surgical procedure. Aneurysm bulging and formation depends mainly on heart rate, contractility and afterload. A patient with ventricular aneurysm usually presents with acute onset of dyspnea, palpitation and angina. Fibrin is deposited on the walls of the aneurysm and may be dislodged as embolus. Emboli from the aneurysm can give rise to peripheral manifestations of embolization like stroke, pulmonary embolism, Raynaud's phenomena or myocardial infarction.

Chest roentgenograms most often reveal enlargement of the ventricle. Diagnosis may be confirmed by minimally invasive techniques like ventriculography and selective coronary arteriography.

Treatment of ventricular aneurysm consists of aneurysmectomy combined with correction of any significant valvular abnormality and bypass of major coronary obstructive lesions.

Because of the severity of the illness and the frequent presence of associated dysfunction of other organ systems mortality is much higher in patients presenting in emergency situations than in those who undergo elective aneurysmectomy.

Infections associated with the prosthetic material used for ventriculotomy closure require repeat operation and removal of all infected material for eradication of the infection.

CONCLUSION
Despite its high mortality, several cases of successful surgical treatment have been reported such as in our case.

References
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