A giant left ventricular thrombus: a shrimp in the heart

Left ventricular thrombus (LVT) is an often-seen complication of acute myocardial infarction, and usually develops within the first 2 weeks. Although, novel therapies such as percutaneous coronary intervention and fibrinolysis have reduced frequency of LVT, it is still a major life-threatening problem, as it may lead to arterial embolic complications like stroke. In general, it is suggested that patients found to have LVT receive warfarin anticoagulation therapy for at least 3 months. In cases with mobile or thin-stemmed thrombus, however, surgical treatment should be considered and performed immediately.

Presently described is case of a 56-year-old male patient. He was referred to our clinic for giant thrombus in the LV. The thrombus was detected incidentally during cardiac evaluation at routine 3-month follow-up after left anterior wall myocardial infarction. According to echocardiographic findings, thrombus had a thin stalk and was extremely mobile in the LV. Surgical excision was mandatory due to high risk of embolization. The patient underwent cardiopulmonary bypass and LV was opened. A huge thrombus with unusual shape resembling a shrimp was revealed (Fig. 1) and completely excised (Fig. 2). Coronary revascularization was not needed due to patent left anterior descending stent. LV systolic function was preserved and ventricular aneurysm was not observed. Following uneventful postoperative course, the patient was discharged without any complications.

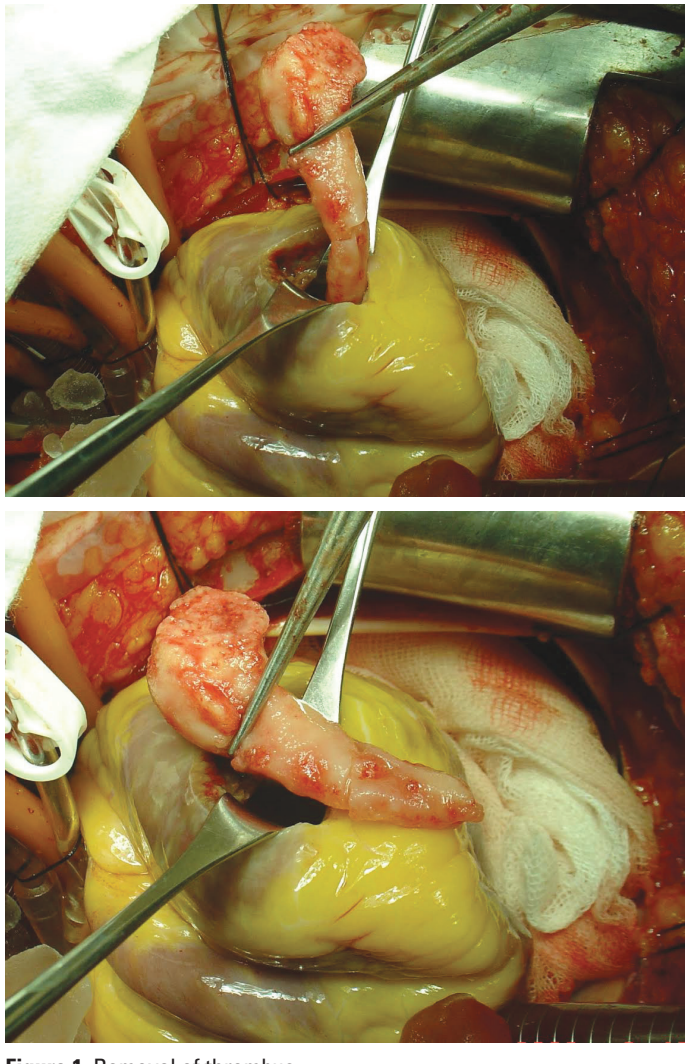

Figure 1. Removal of thrombus

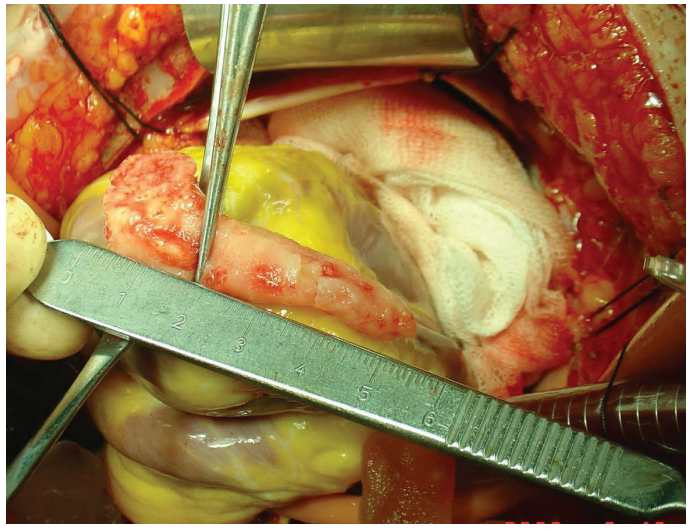

Figure 2. Huge excised thrombus approximately 55 mm in size

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Giant pheochromocytoma in type 1 neurofibromatosis patient

A 54-year-old man, previously diagnosed with neurofibromatosis type 1 (NF-1) and depressive affective disorder, presented with vertigo, repetitive presyncope and palpitations. Physical examination revealed multiple neurofibromas, café-au-lait spots and axillary freckling (Fig. 1), tachyarrhythmia, and high blood pressure (BP). Electrocardiogram (ECG) indicated paroxysmal atrial flutter of 150 beats per minute with frequent recurrence. Stable sinus rhythm was achieved with alfa/beta blockers and

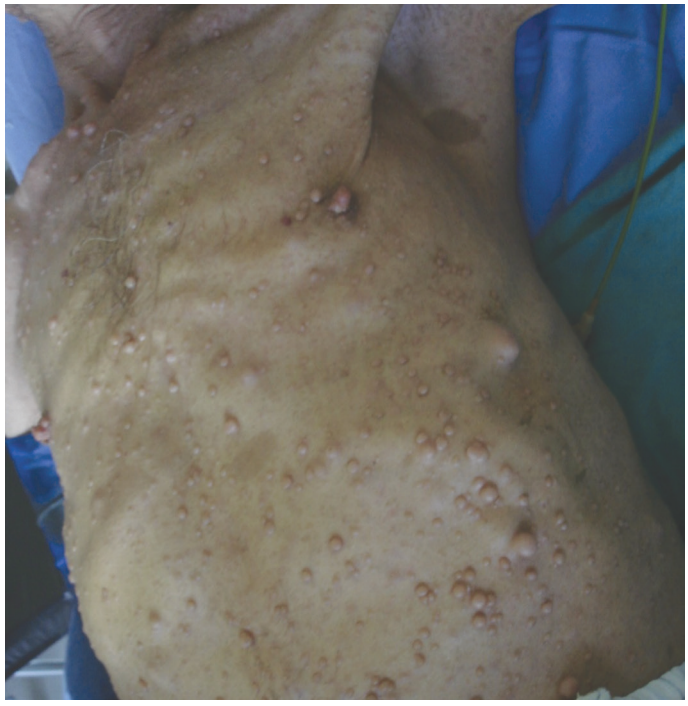

Figure 1. Multiple neurofibromas (0.5–4 cm) located in the thorax, abdomen, and upper limbs, along with café-au-lait spots and axillary freckling

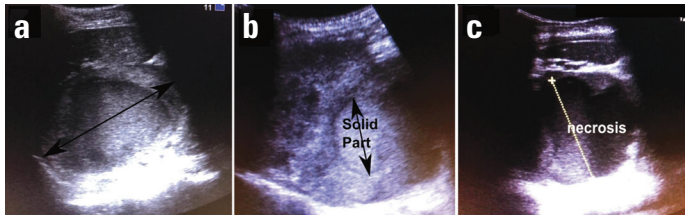

Figure 2. Abdominal ultrasonography. (a) mass 110x114 mm in size (double-headed arrow) located in the left adrenal gland, (b) solid part of the tumor (double-headed arrow), (c) area of necrosis 70 mm in size

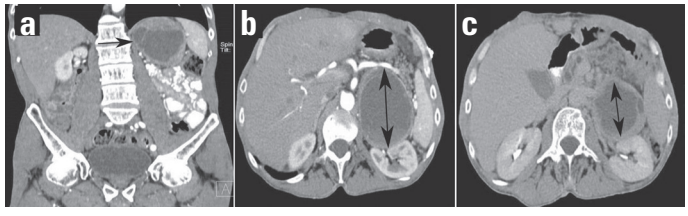

Figure 3. Abdominal computed tomography scans revealing 90x81x95 mm lesion with mass effect (but without invasion) on the neighboring structures, and more than 80% of the tumor occupied by necrosis. (a) Coronal plane, and (b, c) axial plane

amiodarone. There were no ischemic changes on ECG and echocardiographic features were normal. Continuous BP monitoring revealed significant fluctuation in BP values: systolic BP 80-195 mm Hg, diastolic BP 31–113 mm Hg. Serum catecholamine level was elevated (metanephrine 420 pg/mL, normetanephrine 1000 pg/mL). Laboratory tests showed mild increase in serum creatine kinase of 929 U/L and creatine kinase-myocardial band of 71 U/L – catecholaminergic myocarditis, and hyperglycemia (175 mg/dL).

Abdominal ultrasonography revealed a 110x114 mm mass with necrotic area (Fig. 2) located in the left adrenal gland. Abdominal computed tomography scan (CT) confirmed this finding (Fig. 3). Together with endoscopy, CT also revealed diffuse recto-colic and gastro-duodenal polyposis (0.5–3 cm) – chronic inflammatory infiltrate. Another CT finding was inhomogeneous diffuse osteoporosis. Assembling all the data, diagnoses of NF-1 and pheochromocytoma were established and conventional left adrenalectomy was performed with favorable postoperative evolution (Fig. 4). Histopathological analysis confirmed diagnosis of pheochromocytoma with benign aspect (Fig. 5).

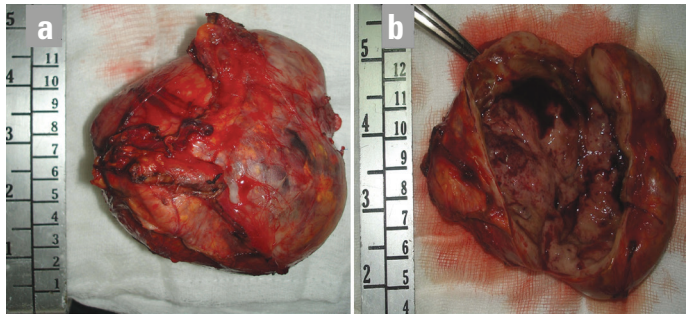

Figure 4. (a) Operatory specimen of reddish mass 110x110 mm in size and well circumscribed; (b) Cross section of the tumor specimen shows heterogeneous brown discoloration and cystic spaces related to hemorrhagic necrosis

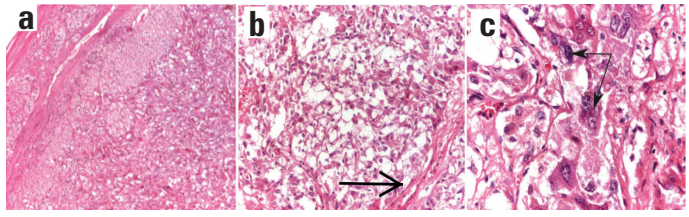

Figure 5. (a) Tumor bordered by capsule and adrenal cortex (H&E x4), (b) cell nesting pattern surrounded by stroma and vessels (arrow) (H&E x10), (c) cytonuclear details: cells with finely granular cytoplasm and intracytoplasmic hyaline globules, nuclei of various sizes and shapes (round, oval) with prominent nucleolus (arrow) (H&E x20)

NF-1 has an incidence of 1:3500 births. Between 1% and 5% of these patients have associated pheochromocytoma, but tumors larger than 70 to 80 mm are rare (<5%); the statistical probability of finding this association ranges between 1:1,400,000 and 1:7,000,000 cases.

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