sedation and endotracheal intubation, signs of transtentorial herniation (absence of verbal response and eye opening, decerebrate rigidity of the right limbs) and systemic complications (fever, supraventricular tachycardia and haemodynamic instability). Due to electrolyte alterations, she required a new HD session on the third day, which conditioned a further neurological deterioration (unresponsive right mydriasis, absence of motor response), with progression of the haemorrhage (volume, 135 ml; fig. 1C) in the control CT scan. The next HD session took place on the fifth day, and on the sixth day she died due to cerebral death.

Haemodialysis, applied to patients of increasingly advanced age and with elevated comorbidity, increases the already high risk of brain haemorrhage in patients with nephropathies, as described in prospective series in countries with low transplantation rates (Japan, United States). This observation is attributed to the use of anticoagulants, fluctuations in volemia and increases of perilesional oedema through osmotic changes during the procedure[2-4]. These are brain haematomas with a high probability of rebleeding (5-10 times higher) and early mortality (80% in the first month, twice that of the general population)[5]. The low level of consciousness on admission, the large size and irregularity of the haematoma, the hypertension (especially diastolic), the diabetes mellitus, the increase in fibrinogen and prothrombin time have all been considered as poor prognostic factors. Surgical treatment is not recommended due to the high risk of rebleeding. It is necessary to maintain the renal replacement therapy, although haemodialysis may condition the growth of brain haematomas even when performed without heparin, as illustrated by our case. Techniques such as continuous haemofiltration or the use of nafamostat mesilate instead of heparin could help to reduce this risk[5,6].

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Epileptic seizure as a first sign of a cardiac angiosarcoma

Crisis epiléptica como primera manifestación de angiosarcoma cardíaco

Dear Editor:

Primary cardiac tumours are a rare entity. Their incidence varies between 0.0017 and 0.033% depending on the series consulted[1,2]. Only 0.2% of cases are found in systematic autopsies and the majority are benign (90%)[1]. Among primitive malignant cardiac tumours, sarcomas stand out for their frequency (76-78%), and angiosarcoma is the most common in adults[1-3], prevailing between the second and fifth decade of life[3] and in the male gender[2-4]. Two thirds of angiosarcomas are located in the right atrium, although those located in the left atrium have a better prognosis. Case report: Caucasian male, 45 years old, with no known allergies or relevant medical history. Ex-smoker (10 cigarettes a day for two years) having no toxic habits. Family history included the death of his father at age 57 due to gastric cancer, of his mother at age 65 due to melanoma with disseminated bone disease, of his brother at age 45 due to lung neoplasm, and of his sister at age 42 due to brain metastasis with primary lung tumour and of another sister at age 57 due to liver sarcoma. Although he was previously well, he presented a focal seizure (clonus, left hemisphere) with subsequent generalisation. The neurological examination observed dysarthria and left distal crural paresis (4/5) with Babinski sign. Cardiac auscultation was absolutely normal. The complementary tests showed no significant alterations in blood count, biochemistry, immunity, coagulation or blood gases. The serological tests performed to rule out brain damage caused by infections (HIV, cytomegalovirus, toxoplasma) were negative. An increase in serum enolase (33.6 ng/ml) was observed, along with normality of other tumour markers. The neuroimaging tests performed (computed tomography [CT] and cerebral magnetic resonance imaging [MRI]) (fig. 1) revealed an image compatible with right parietal solitary metastasis with slight concomitant bleeding. A chest CT (fig. 2) revealed metastatic lung nodules and a tumour in the right atrium, shown in the echocardiography as a rounded neoformation of 59?42?30 mm, with a broad base of implantation, variable density, polycyclic edges and with small, mobile areas on its surface. The remaining study results (bronchoscopy, bone

Figure 2 Chest computed tomography: nodular image in the right atrium.

Figure 1 Brain MRI, T1 sequence: right parietal image compatible with metastasis.

scintigraphy, colonoscopy, and lung function tests) were normal. The biopsy of a lung nodule by thoracoscopy was compatible with stage IV cardiac angiosarcoma. The patient was treated with whole brain radiotherapy and palliative chemotherapy with taxol at a weekly dose of 127.5 mg, ruling out surgery; he died a few months later due to secondary infectious complications. Cardiac angiosarcoma, due to its low frequency and its diagnostic and therapeutic difficulty, represents a significant clinical challenge. Given its aggressiveness and frequency of metastasis at diagnosis, treatment options are limited[2]. Most often it is asymptomatic until the most advanced stages of the process[5]. The clinical presentation is varied, either by local growth of the tumour (alteration of cardiac flow or valve function) that affects the pericardium and nearby structures (pericarditis, cardiac tamponade, arrhythmias, stroke and tumour embolism) or by distant extension[2-5]. Metastases are frequent when the disease is diagnosed and the lungs, liver and brain are the most common locations[2], a fact that clearly worsens the prognosis[1,4,5]. Patient survival rates range from 9 to 12 months after diagnosis if the tumour cannot be resected[1,3]. In general, the development of imaging tests (spiral CT and MRI) has improved pre-surgery diagnosis[1,5]. The most widely prescribed treatment in patients without distant disease is radical resection surgery in combination with adjuvant chemotherapy and/or radiotherapy[1,2]. Some authors propose heart transplant as an alternative to surgery; but the survivals obtained do not differ from those achieved with conventional surgery[1,2,5].

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