Heart failure as consequence of a systemic disease

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Introduction: Heart failure is a frequent disease, being estimated an increasing prevalence in the next years. It possesses several comorbidities associated and is considered one of the major cardiovascular death’s causes. Carcinoid tumors are rare and generally are affected to the gastrointestinal tract. At a low number, these tumors manifests as carcinoid syndrome, presenting diverse multiorgan dysfunction that are affected by the hormone production of the tumor.

Case Report: Male, 72 years old, with past medical history of diabetes mellitus type II, arterial hypertension, venous insufficiency and severe tricuspid regurgitation detected 5 months before admission. Consult the Emergency Room for 3 times in 3 months, for diarrhea, nausea, weight loss of 7 kg and intermittent abdominal pain. The thoracic and abdominal CT reveals a moderate pleural effusion, ascites, mesenteric mass of 11x9x6 cm and a regional adenopathy. Was performed an ultrasound guided needle biopsy, and the patient was followed up in hospital consultation, where fifteen days later presented in anasarca, with BNP of 608 ng/L, and worst renal function (no records of renal failure, until this point). Was admitted to an etiology study, where was identified a progressing cardiorenal syndrome, remains with diarrhea. Evolution for shock, with continued poor clinical and blood work, being impossible to revert the clinical status, causing the patient death after 7 days. On the last day the mass biopsy revealed a neuroendocrine neoplasia with intestinal origin.

Discussion: Usually, carcinoid syndrome presents gastrointestinal hypermotility and flushing as a result of higher levels of vasoactive substances produced by the tumor. Carcinoid heart disease occurred in the majority of patients with carcinoid syndrome, and 20-30% of them developed a heart involving disease as first manifestation, however carcinoid heart disease remains as the major responsible for the high mortality rates in this syndrome. The pathology is characterized by a deposition of fibrous tissue in the heart, especially in the endocardium of valvular cups. The tricuspid and the pulmonary valve are the most frequently affected, and the carcinoid plaque can cause stenosis, regurgitation or both. This patient had a previous echocardiogram, performed 5 months before, with severe tricuspid regurgitation, without pulmonary hypertension, that never was stratified or correct evaluated by the physician. Cardiac surgery is the only effective treatment and should be considered when are metastatic carcinoid disease, for example with valve involving, but the symptoms are well controlled. The treatment of the tumor, don’t interfere with the cardiac expression or is associated to a reversion on the valve damage. The presence of advance symptoms of heart failure, like in this patient in NYHA III at presentation, are a poor prognostic feature, which was verified few days later.