Comorbidity in Patients Admitted to a Department of Cardiology Due to Heart Failure

Comorbilidad de los pacientes ingresados por insuficiencia cardíaca en un servicio de cardiología

To the Editor,

Understanding the factors that can affect the prognosis of patients admitted into hospital due to heart failure and shock and the resources used during their treatment is becoming more relevant. Therefore, recent multi-center data from various Spanish hospitals have been analyzed for the impact of comorbidity on the development of heart disease in patients who have been admitted to internal medicine units. The authors detected other conditions in 60% of heart disease patients, which is described as comorbidity and, although this was not associated with the mortality variable analysis, they concluded that the increase in comorbidity measured by the Charlson’s index (Chi) is linked to greater levels of mortality.

According to clinical records, in 2008, 130 patients suffering from DRG-127 (diagnosis-related group, heart failure and shock) were admitted in the cardiology department of our tertiary hospital. We analyzed hospital stays longer than the standard 7.9 days in relation to different variables. The age was 71.5 years (median), 48.5% were female and they were described as pluripathological patients (with 2 or more conditions), using the definition of an expert committee. A series of patients admitted to internal medicine units showed a prevalence of pluripathology in 42% of the cases. Concomitant diseases were: 25% of a rheumatic nature or chronic kidney failure, 33.8% respiratory, 4.4% chronic inflammatory intestinal disease or hepatopathy, 16% neurologi-cal, 11.8% peripheral arteriopathies or diabetes mellitus with visceral repercussions, excluding the coronary; and 14.7% secondary oncological or hematic conditions not requiring specialist treatment (7/). Of these patients, 87% were pluripathological and 69% had been previously admitted to the unit; 48.5% suffered from auricular fibrillation and 32.4% from anemia. By logistical regression analysis, a hospital stay longer than 7.9 days was only associated with auricular fibrillation (odds ratio OR = 2.48; 95% confidence interval CI, 0.88–6.99; P = .04) or anemia (OR = 3.4; 95% CI, 1–11; P = .02), conclusions which were similar to those of other authors.

Chi has been questioned as an indicator of comorbidity because it only estimates life expectancy, as each category is associated with an adjustment based on 1-year mortality risk. Nevertheless, the classification we used takes into account the effects of comorbidity on the biology of the patient. In our series, we did not find any relationship between comorbidity and hospital mortality, probably due to the size of the sample and the methodology applied. It has been stated that patients referred to cardiology units suffer less comorbidity. Our analysis reveals a high level of comorbidity in admitted heart disease patients who were subsequently monitored as heart disease outpatients and their comorbidity had no repercussions related to long hospital stays.

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Heyde’s Syndrome

Síndrome de Heyde

To the Editor,

Heyde’s Syndrome is described as an association between aortic stenosis and bleeding due to intestinal angiodysplasia. This hemorrhagic syndrome has been linked to an acquired deficit of Type Ila von Willebrand factor.

We present the case of an 89-year-old woman with a personal history of hypertension, dyslipidemia and known, but unstudied, systolic murmur. She came to the accident and emergency department due to an episode of syncope and melena. On laboratory analysis hemoglobin values were found to be 6.4 g/dL with a hematocrit of 18%. In view of these results, the patient needed a transfusion and was admitted so that the anemia could be
studied. An abdominal contrast computed tomography, colono-
scopy and oral endoscopy were performed, but the bleeding site
was not found. As hemorrhage persisted and repeated transfusions
were necessary, emergency surgery was performed. During
surgery, intraoperative endoscopy was performed, and the
bleeding site was found in the proximal ileum. A corresponding
intestinal resection was carried out at that level. A pathology study
found the resected tissue to be compatible with intestinal
angiodysplasia (Fig. 1). The patient progressed favorably, and on discharge was referred
to the Cardiology Department so that her murmur could be
studied. An echocardiogram was requested and showed a calcified
aortic valve with a maximum gradient of 75 mm Hg, a mean
gradient of 38 mm Hg and an effective area of 0.7 cm², all of which
is compatible with severe aortic stenosis (Fig. 2). It also showed a
non-dilated left ventricle with slight hypertrophy and preserved
systolic function. An enhanced coagulation study was requested,
including platelet function and measurement of the function and

Figure 1. Histological preparation of the colon wall in which thin-walled endothelial-lined vessels with ectasia are seen (H–E, ×10 and ×120).

Figure 2. Image of aortic short axis transthoracic echocardiogram showing thickening of valve leaflets with restricted opening and with continuous Doppler showing elevated transvalvular gradients.
concentration of von Willebrand complex: factor VIII (PFA-100), which was normal. Elective minimally invasive valve replacement surgery was proposed, which the patient rejected.

Angiodysplasia is a degenerative disease of the intestinal mucosa related to the aging process and one of the main causes of gastrointestinal bleeding in the elderly. Its association with aortic stenosis is well known. Many mechanisms have been considered to explain this syndrome; currently the most prominent is an acquired deficit of Type Ila von Willebrand factor, characterized by a loss of the largest VWF multimers, although this causal relationship cannot always be demonstrated, as in this case.

Von Willebrand factor is a high-molecular-weight multimeric protein secreted by endothelial cells that stimulates platelet adhesion and aggregation when there is vascular damage. These multimers are cleared by plasma proteases that are especially active in turbulent blood flow situations.

In aortic stenosis, fragmentation of VWF multimers is increased, which reduces their number and predisposes bleeding. Studies have reported that these coagulation anomalies are directly related to the severity of aortic stenosis and are reversible after valve replacement if successful, so that recurrence of bleeding could be an indication of persistent stenosis. Therefore, although in some cases of extensive bleeding, such as this one, intestinal resection is necessary, many authors have shown that gastrointestinal bleeding ceases after valve replacement, being even more likely to prevent recurrences than intestinal resection.

Heyde’s Syndrome is an entity to be kept in mind, even more nowadays with an aging population, when assessing patients with a history of bleeding or anemia, especially when the bleeding site is not found on initial examination. Based on these data, we propose the hypothesis that this association could be a new indication for valve replacement; however, gastrointestinal bleeding is not used as an indicator in current clinical practice guides.

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Spontaneous Coronary Dissection: Role of Intravascular Ultrasound

Discepción coronaria espontánea: papel del ultrasonido intravascular

To the Editor,

A 49-year-old woman with no cardiovascular risk factors was admitted to our department with high-risk non-ST-elevation acute coronary syndrome. Coronary angiography revealed severe stenosis in a segment located in the middle portion of the anterior descending artery, with no evidence of other lesions (Fig. 1). Given the ambiguity of the angiogram and the absence of risk factors, we decided to perform intravascular ultrasound, which revealed localized dissection that had not been visible in the angiogram (Fig. 1). There was no apparent intimal rupture but there was evidence of hematoma within the intima. Given the lack of information on the course of the lesion, and since it was located in the anterior descending artery of a young woman, we decided to perform angioplasty with implantation of a drug-eluting stent, with excellent angiographic results (Fig. 2).

Spontaneous coronary artery dissection is a rare cause of acute coronary syndrome (ACS) and sudden death. It has traditionally been described in 3 groups of patients: patients with coronary artery disease, women during the peripartum period, and a heterogeneous group of patients with idiopathic disease, comprising individuals without cardiovascular risk factors, those with connective tissue disorders (Marfan syndrome, Ehlers–Danlos syndrome, etc.), and cases of intoxication.

There is a clear predominance of women (80% of cases), with a mean age at presentation of 40 years and 25% of cases occurring in the peripartum period. The overall incidence ranges from 0.1% to 1.1%. The most commonly affected artery in women is the anterior descending; whereas in men the right coronary artery is more often affected. Cases of multivessel dissection and of left main coronary artery dissection have also been described.

The pathophysiology involves hemorrhage between the medial layer and the external elastic lamina, leading to separation of the layers, expansion of a false lumen, and compression of the native lumen that results in ischemia. Rupture and hemorrhage of the vasa vasorum has been suggested as a potential mechanism. Eosinophilic infiltrates have also been observed in the dissected region, suggesting a possible inflammatory or vasculitic mechanism, although some authors maintain that the presence of inflammatory cells is a consequence rather than a cause of the dissection. The association with the peripartum period and the use of oral contraceptives supports the hypothesis that the condition occurs as a result of connective tissue changes induced by hormones (endogenous or exogenous) and the hemodynamic changes characteristic of pregnancy. Numerous cases have also been reported in association with acute changes in intrathoracic pressure. Nevertheless, in many patients, no clear trigger is observed and it is likely that there are multiple etiologies.

Diagnosis is based on observation of a radiolucent intimal flap in the coronary angiogram. Diagnosis using angiography alone is often difficult when there is no apparent intimal rupture, with no...