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 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 multi-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 stay 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 pluriopathology in 42% of the cases. Concomitant diseases were: 25% of a rheumatic nature or chronic kidney failure (II); 33.8% respiratory (III); 4.4% chronic inflammatory intestinal disease or hepatopathy (IV); 16% neurological (V); 11.8% peripheral arteriopathies or diabetes mellitus with visceral repercussions, excluding the coronary (VI); and 14.7% secondary oncological or hematic conditions not requiring specialist treatment (VII). 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, colonoscopy 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.
Acquired deficit of Type IIa von Willebrand factor, characterized by
inflammation and caused by circulating anti-von Willebrand
factor antibodies. Currently, the most prominent factor is 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.

Spontaneous Coronary Dissection: Role of Intravascular
Ultrasound

Disección 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 ste-
nosis 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%.[2] The most commonly affected artery in women is the anterior
descending, whereas in men the right coronary artery is more often
affected.[2,3] 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.[2] Rupture and hemorrhage of the
vasa vasorum has been suggested as a potential mechanism.[2,3]
Eosinophilic infiltrates have also been observed in the disected
region, suggesting a possible inflammatory or vasculitic mechan-
ism,[2,3] 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.[3] 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

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