tend to drop over time and can even become normal. Additionally, the prognostic value of pulmonary biopsy is also unclear. The absence of fibrosis, as in our patients, may be a marker of reversibility. Pulmonary vasodilators and ventilatory assistance have been shown to be useful as a bridge to eligibility in both adult and pediatric patients, as they allow transplantation in patients initially rejected due to pulmonary hypertension. This strategy may be preferable to cardiopulmonary transplantation.

Ferran Gran, a,b Dimpna Albert, c Joan Sanchez-de-Toledo, b Joan Balcells, b Joan Carles Ferreres, a and Raúl Abella a

aUnidad de Cardiología Pediátrica, Hospital Universitario de la Vall d’Hebron, Universidad Autónoma de Barcelona, Barcelona, Spain
bServicio de Cuidados Intensivos Pediátricos, Hospital Universitario de la Vall d’Hebron, Universidad Autónoma de Barcelona, Barcelona, Spain
cServicio de Anatomía Patológica, Hospital Universitario de la Vall d’Hebron, Universidad Autónoma de Barcelona, Barcelona, Spain
dServicio de Cirugía Cardiaca Pediátrica, Hospital Universitario de la Vall d’Hebron, Universidad Autónoma de Barcelona, Barcelona, Spain

Nonvalvular Atrial Fibrillation: the Problem of an Undefined Definition

Fibrilación auricular no valvular: el problema de una definición indefinida

To the Editor,

The term nonvalvular atrial fibrillation (NVAF) is used with increasing frequency to describe patients who may benefit from new oral anticoagulants (NOACs). This is a cause for concern for us because the European guidelines for the management of atrial fibrillation, dated 2012, 1 state that “no uniform or satisfactory definition of these terms exists.” The indication for NOACs is based on 4 pivotal studies. To clarify this concept, we have reviewed the inclusion criteria in the protocols of these studies in terms of native valve lesions:

- The RE-LY study 2 did not include the term NVAF. Patients with “hemodynamically relevant valve disease” were excluded and, as far as we are aware, a more precise definition was not included.

- The ROCKET trial 3 was the only study that included the term NVAF. However, the protocol only excluded patients with “hemodynamically significant” mitral valve stenosis. For the indication of rivaroxaban, atrial fibrillation with a valve lesion other than mitral valve stenosis would not be considered NVAF.

- The authors of the ARISTOTLE trial 4 and ENGAGE AF-TIMI 48 trial 5 did not use the term. Both these trials excluded only patients with moderate or severe mitral valve stenosis.

A patient with severe aortic stenosis or mitral valve regurgitation with atrial fibrillation would not have been excluded from 3 of the 4 pivotal trials due to valve lesions. It would appear striking and inconsistent to describe such a patient as having NVAF. With valve disease, generalizations are inappropriate. Thus, thromboembolism as a pathophysiologic mechanism for mitral stenosis cannot be considered similar to mitral valve regurgitation or pulmonary stenosis.

The use of a poorly defined term may lead to problems for certain therapeutic indications. To quantify the problem, we reviewed the echocardiography database of a secondary university hospital with no heart surgery facilities. In the last 6 months of

*Corresponding author:
E-mail address: fgtran@vhebron.net (F. Gran).

Available online 14 June 2014

REFERENCES


http://dx.doi.org/10.1016/j.rec.2014.03.006

Figure. A: Hematoxylin–eosin staining which shows a preacinar artery with cellular hypertrophy of the middle layer and large loss in lumen diameter (arrow). The upper box (Masson trichrome stain) shows another preacinar artery with plexiform changes. B: Hematoxylin–eosin staining of a preacinar artery with intimal thickening (arrow). The upper box (Masson trichrome stain) shows an intraacinar arteriole with muscle hypertrophy.
Table
Valve Lesions in 748 Patients With Atrial Fibrillation but Without Prostheses

<table>
<thead>
<tr>
<th>Lesion</th>
<th>No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No lesion</td>
<td>5 (0.67)</td>
</tr>
<tr>
<td>Any grade VS or VR ≥ grade II</td>
<td>587 (78.5)</td>
</tr>
<tr>
<td>Any grade VS or VR ≥ grade III</td>
<td>472 (63.1)</td>
</tr>
<tr>
<td>Any grade MS</td>
<td>158 (21.1)</td>
</tr>
<tr>
<td>Moderate or severe MS</td>
<td>93 (12.4)</td>
</tr>
</tbody>
</table>

MS, mitral valve stenosis; VR, regurgitation of any valve; VS, stenosis of any valve.