double anti-aggregation therapy. The clinical follow-up at 4 months was satisfactory.

The prevalence of PFO in patients with a history of stroke ranges between 20% and 40%, and the estimated annual rate of recurrent ictus among PFO patients ranges between 1.5% and 12%, depending on the population studied.1 The optimal treatment for preventing strokes in PFO patients has not been identified. The international clinical practice guidelines recommend antiplatelet aggregation treatment for patients with transient ischemic attack and PFO, although it also could be indicated as an anticoagulant in other situations, such as atrial fibrillation: "[…] insufficient data exists […] regarding the use of percutaneous closing devices for PFO in patients with their first ictus; this strategy could be considered for those patients who have suffered repeated cryptogenic strokes in spite of medical treatment."2,3

During the percutaneous closure of a PFO, the total incidence of device thrombosis is small, varies according to the study, and also depends on the type of occluder used. In the Krumsdorf4 series (with 1000 patients [593 PFO and 407 with atrial septal defects] and TEE used during the procedure and at 4-week follow-up), the total rate was 6%. In the TEE study after 4 weeks, no thrombi were found in the 292 cases involving an Amplatzer occluder, 1 (1%) in 161 Helex devices, 3 (7%) in 127 PFO-Star devices, and 7 (7%) in 100 CardioSEALs. Although the incidence was low, the best predictors for the thrombi formation were the presence of persistent atrial fibrillation and ASA. No increased benefit was observed when treating patients with a combination of aspirin and clopidogrel with respect to the group that received only aspirin as a thrombosis prophylaxis treatment. In general, thrombus was resolved through medical treatment in 17 of 20 patients within 4 weeks to 6 months (warfarin and/or heparin); in 3, a surgical extraction of the thrombus was required.

This case illustrates the usefulness of TEE during percutaneous structural procedures, as well as the need for intensive anti-aggregant and anti-coagulant treatment in order to avoid complications in patients with thrombi.

Eduardo J. Lezcano,* José R. Ruiz, and Isaac Lacambra
Servicio de Cardiología, Hospital Clínico Universitario Lozano Blesa, Zaragoza, Spain

* Corresponding author:
E-mail address: eduardo.lezcano@gmail.com (E.J. Lezcano).
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Childhood and Adolescent Obesity. A Matter of Confusion

Obesidad infantojuvenil. Un terreno abonado para la confusión

To the Editor,

We have read the article recently published by Escribano et al. in the Revista Española de Cardiología with great interest.1 Epidemiological studies are a starting point for performing interventions and analytical studies, and have recently recovered the scientific prestige that they had in previous decades. We would like to specify some aspects of the definition of obesity.

As many other authors have pointed out, in the clinical field obesity is indirectly defined using the body mass index (BMI) and the waist circumference (WC), with established cut-off points for both. These values are well recognized for the adult population, but underestimate the actual prevalence in children and adolescents.2 The same occurs with other cardiovascular risk factors (CVRF): arterial hypertension and hypercholesterolemia.

Pediatric societies have shown consensus on defining the prevalence of CVRF, using percentile charts validated by cross-sectional and longitudinal studies. However, there are some controversies in defining child and adolescent obesity using BMI, ie, whether age- and sex-dependent national charts with a percentile cut-off point of 97th (p97) should be used,3 or international criteria should be taken as reference.4 There is more agreement regarding abdominal obesity, fixing the cut-off point at the 90th percentile (p90).3 For that reason, Escribano et al. should have shown the actual prevalence of general and abdominal obesity in accordance with criteria specific to the 15- to 17-year-old group, showing separate data for adults.

Our group has published CVRF prevalence data for children and adolescents including a sample of 1534 individuals between 9 and 17 years of age from southern Spain.5 The prevalence of obesity in the 15 to 17 age group was 9.4% according to national criteria (95% confidence interval [CI]: 7.9%-10.8%),6 6.5% being male and 11.3% being female. If we were to use BMI > 30 to define obesity, we would obtain 2.6% in males and 5.5% in females. These data therefore contrast with those published for the adult population from the first age group in the Escribano et al. study. They are however in accord with the enKid studies, which serve as a national reference in Spain, and show that the prevalence of child and adolescent obesity in the center of Spain (Castile and Leon) are very similar, although slightly less than data for Andalusia, in the south.5 Prevalence of abdominal obesity for 15- to 17-year-olds

Figure 2. Good apposition of a double disc device, with no images of thrombi.
was 88% in our study (95% CI: 83.8%-93.7%), which is very different from that found in Escribano et al’s article.

The authors reported a relationship between obesity (mainly abdominal) and the presence of other CVRF in the adult population, which is a phenomenon that we also found in our study. To make it easier to define obesity in early life stages, which are subject to growth, we have validated the waist-to-height ratio, estimating 0.5 as the cut-off point for establishing the prevalence of abdominal obesity. As such, this method has an advantage over using absolute WC and BMI values, as complicated percentile charts for age and sex can be avoided. This new anthropometric index should be validated externally in the child and adolescent population.

We would like to conclude our letter by congratulating Escribano et al. for their study, which serves as a national reference point, and the editorial team for accepting epidemiological studies of this type in their prestigious clinical journal.

Manuel Almendro-Delia,* Víctor López García-Aranda, and Rafael Hidalgo-Urbano

Servicio de Cardiología, Área del Corazón, Hospital Virgen Macarena, Seville, Spain

* Corresponding author: E-mail address: almendrode@secardiologia.es
(M. Almendro-Delia).
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Usefulness of Coronary Computed Tomography in Real Practice

Valor, en la práctica clínica real, de la angiografía coronaria por tomografía computarizada

To the Editor,

Patients frequently seek medical advice in our hospital emergency department due to chest pain. It is for that reason that we read the editorial that recently appeared in Revista Española de Cardiología with interest. This article reviewed how certain non-invasive image tests contribute to assessing patients with chest pain, as reported in other studies. Coronary computed tomography (CT) is especially reaching a notable peak, given the promising results presented by various authors. As far as we are aware, it is almost exclusively used in clinical research protocols in our field, meaning that it is difficult to be able to establish whether its performance and outcome are comparable to those found in the English literature. To verify this fact, we would like to present our experience.

During 2008, we chose a subgroup of patients attended to in the chest pain unit (CPU) of our emergency department, within the times that the coronary CT machine was available. Having applied the CPU diagnostic protocol, they were classified as low risk. In total, 319 of 1087 patients (29.3%) were eligible for recruitment. Among these, we chose those that had no coronary disease events, with at least one coronary risk factor and without contraindications for coronary TC. Of these 55 patients, 1 refused to participate, leaving 54 (16.9%) patients. As a result, our first interpretation is that, in usual clinical conditions, only a small percentage of patients are finally suitable for coronary TC (in our study around 20%). Therefore, this technique cannot be currently used for all low-risk patients with chest pain. Even if we had included the 110 patients excluded for not having coronary risk factors, the percentage of suitable patients would have been about 50%—164 of the 319 (51.4%)—which is similar to that of the Goldstein et al. study. Secondly, we would like to highlight the high percentage of false positive found in our study: 33%. These results are in agreement with the statements made by Kontos in the sense that coronary TC has to be used along with other noninvasive methods to correctly assess chest pain and it increases the percentage of cardiac catheterization. We believe that these findings can improve over time as doctors gain more experience and machine resolution increases. This is a second important reason for questioning the current usefulness of coronary CT in real practice.

However, we are positive about the future usefulness of coronary CT. The results from the controlled studies are outstanding and encouraging for emergency room doctors, who are often under extreme pressure. The only way that we are able to safely and cheaply shorten the waiting hours that these patients spend in the emergency department is by encouraging future studies that delve deeper into which subgroup of patients to consider and how coronary CT can be implemented in assessment protocols for patients with chest pain in hospital emergency departments.

Miquel Sánchez,* José Tomás Ortiz-Pérez, Beatriz López, and Óscar Miró

Sección d’Urgències Medicina, Área d’Urgències, Hospital Clínic de Barcelona, Barcelona, Spain

* Corresponding author: E-mail address: m.sanchez@clinic.ub.es (M. Sánchez).
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