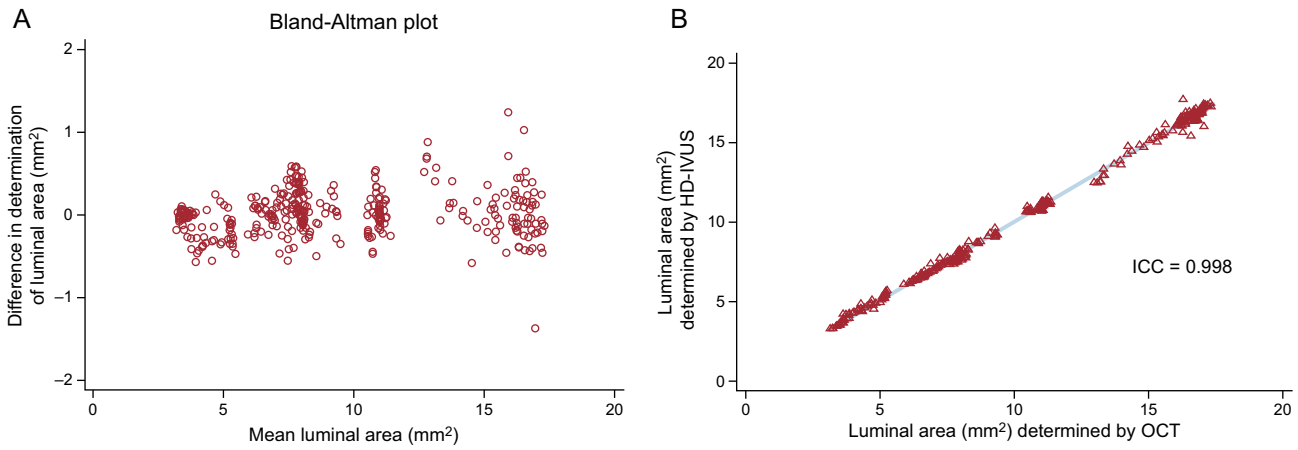

Figure 2. A: Bland-Altman plot showing the excellent concordance between HD-IVUS and OCT for luminal area determination. B: (illustrative only) the close linear relationship between the 2 techniques for luminal area determination, determined quantitatively from the ICC. HD-IVUS, high-definition intravascular ultrasound; ICC, intraclass correlation coefficient; OCT, optical coherence tomography.

resolution, HD-IVUS was inferior for evaluating adequate device endothelialization. However, by avoiding some of the classic limitations of OCT (aorto-ostial lesions, shadows from thrombotic material, need for contrast) and improving the resolution of conventional IVUS, HD-IVUS may represent a new tool of great interest in both clinical practice and research.

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Selection of the Best of 2017 in Heart Failure in Elderly Patients

Selección de lo mejor del año 2017 en insuficiencia cardiaca del paciente anciano

To the Editor,

Frailty is a clinical syndrome characterized by decreased physiological reserve and resistance to stressors; it is thus a state of vulnerability associated with higher risk of adverse outcomes. It is more frequent in patients with comorbidity and chronic disease. In the cardiovascular disease field, most evidence on this entity is derived from studies evaluating frailty according to frailty phenotype criteria (Fried criteria). This scale considers frailty to be a biological syndrome defined by the presence of at least 3 of the following 5 domains: exhaustion, low physical activity, unintentional weight loss, slowness, and impaired grip strength. Its major limitation lies in its application to acute patients because 2 of the criteria require that the patient perform physical performance tests. A prospective cohort study included 465 patients with a mean age of 82 years who attended 3 Spanish hospital emergency departments due to acute heart failure (HF) (excluding patients with severe functional dependency or previous diagnosis of dementia). Frailty was evaluated using 5 self-reported questions: *a)* exhaustion: "Do you frequently feel that everything you do is an effort?"; *b)* muscular strength: "Do you have difficulty standing up from a chair?"; *c)* slow gait speed: "Do you have significant difficulty in walking outside of your home?"; *d)* physical activity: "Do you not practice physical activity (walking) on a regular basis (3-4 times per week)?"; and *e)* weight loss: "Have you unintentionally lost weight in the past year?". Patients were considered frail if they answered in the affirmative to 3 or more questions. In total, 36.3% of patients had frailty. These patients showed more than double the rate of 30-day all-cause death for patients attended in the emergency department.[1] In addition, a recent meta-analysis linked frailty with the future occurrence of cardiovascular events in the elderly population. Twenty-one studies (18 cohorts) were selected, most performed in the community, with a total of 31 343 individuals aged 65 years or older; 17.9% were frail. Cross-sectional analysis of 10 cohorts (16 400 individuals) showed that prefrailty and frailty were associated with higher risk of all types of cardiovascular disease. Analysis of the 6 prospective cohorts (18 307 individuals), with a median follow-up of 4.4 (range, 1.0-11.4) years, found earlier onset of cardiovascular disease (particularly HF) and higher mortality in prefrail and frail patients.[2]

Similarly, a prospective study of almost 500 elderly patients with HF and a mean age of 85 years determined that 58% of patients were frail.[3] These patients had almost double the 1-year mortality rate, as well as increased risk of readmission and functional decline during follow-up. A systematic review and meta-analysis confirmed the elevated prevalence of this condition in patients with HF,[4] particularly in the elderly population, and its presence was not associated with functional class. The authors of that study also reported a relationship between frailty and HF syndrome and stressed its substantial prognostic implications. Accordingly, all patients with HF should be systematically assessed to detect potentially modifiable situations and thereby enable individualized treatments aimed at reversing these situations.

Regarding natriuretic peptides, the cutoff values for the diagnosis and prognostic stratification of HF in the elderly population are poorly established, and increases are sometimes seen with no apparent structural heart disease or changes in comorbidity-related concentrations. In recent work[5] that included 289 patients older than 75 years admitted due to acute HF (with in-hospital, 1-year, and 5-year mortality rates of 10%, 36%, and 77% and a median survival of 2.2 years), the presence of anemia, renal failure, diabetes, systolic hypertension at admission, moderate-to-severe tricuspid regurgitation, and high concentrations of N-terminal pro-B type natriuretic peptide (NT-proBNP) were independent predictors of mortality, indicating that the prognosis of elderly patients with HF is determined by cardiac causes and their comorbidities. The NT-proBNP level was the most powerful predictor of prognosis, with an optimal cutoff value of 8.275 pg/mL at 1 year. There was no relationship between peptide levels and age. The study limitations include its retrospective design and a lack of consideration of variables that could have affected prognosis during follow-up (cognitive decline, nutritional status, baseline quality of life, and frailty).

Finally, clarification is required of multiple aspects related to the management of cardiovascular diseases in elderly patients.[6] A recent document, in the section concerning HF, stressed the importance of new studies that specifically analyze the role of drugs, devices, and other therapies in this population, paying special attention to the main comorbidities. Strategies are also needed to improve the health care process, accelerate symptom recognition and diagnosis, and boost the application of palliative and end-of-life care.

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Selection of the Best of 2017 in Geriatric Assessment of Elderly Patients With Aortic Stenosis

Selección de lo mejor del año 2017 sobre valoración geriátrica en la estenosis aórtica del paciente anciano

To the Editor,

Geriatric assessment of elderly individuals with significant aortic stenosis (SAS), also called "severe", has received growing attention in recent years. Additionally, the prognostic role of frailty has been consolidated in recent months in large-scale studies.

Shimura et al.[1] analyzed the prognostic impact of the Clinical Frailty Scale (CFS) in 1215 patients from the Optimized CathEter vAlvular iNtervention (OCEAN-TAVI) registry who underwent transcatheter aortic valve implantation (TAVI). The CFS is a semiquantitative tool that classifies individuals into 1 of 9 categories, from 1 (very fit) to 9 (terminally ill). In this study, 1-year mortality increased progressively with each CFS category.

Little comparative information is available on the different frailty scales. Afilalo et al.[2] compared the ability of 7 different frailty scales (Fried criteria, Fried+, CFS, Short Physical Performance Battery, Bern scale, Green test, and the Essential Frailty Toolset [EFT]) to predict 1-year mortality in 1020 patients with SAS who underwent either surgical aortic valve replacement or TAVI. The EFT, which includes