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State-of-the-art on aortic regurgitation; the French TAVI experience for pure aortic regurgitation; OFDI vs IVUS for PCI guidance in ACS; PCI and acute ischaemic stroke; coronary artery innervation; microaxial flow pumps in cardiogenic shock; vasomotion results from the BIOMAG-I first-in-human study; news from the EAPCI; and more

From a review of the latest clinical knowledge on treating aortic regurgitation to navigating in the heart and the latest in innervation and resorbable scaffolds – this issue of Eurointervention has you covered!

Aortic regurgitation: from mechanisms to management

The scope of treatment for aortic regurgitation has widened with the continued evolution of transcatheter aortic valve implantation (TAVI). In a state-of-the-art review, **Andreas Baumbach, Alexander R. Tamm and colleagues** cover the epidemiology and assessment of aortic regurgitation as well as the current treatment options and devices available today.

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French experience of TAVI for AR

Robin Le Ruz, Vincent Letocart and colleagues report on procedural safety and long-term clinical events in pure aortic valve regurgitation patients treated with new-generation devices. TAVI is found to be efficient and reasonably safe, but preventing a second valve implantation is found to be the main challenge in this population, who remain at high risk even after a successful procedure.

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OFDI vs IVUS in PCI for ACS

Hiromasa Otake, Takashi Akasaka and colleagues compare intravascular and optical frequency domain imaging (OFDI) guidance in acute coronary syndrome (ACS) patients undergoing percutaneous coronary intervention (PCI). With high procedural success and comparable minimum lumen areas between the two groups at 8-month follow-up, the authors suggest that OFDI may be an option for guiding PCI in ACS patients.

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Coronary artery innervation in humans

Mert Tokcan, Felix Mahfoud and colleagues bring us a quantitative analysis of coronary artery innervation in humans. Analyses of nerve fibres show that their density, size and distribution vary significantly between the coronary arteries. The authors hope that a more profound understanding of these innervation patterns can help to optimise neuromodulation techniques and advance the possibility of less invasive catheter-based approaches.

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PCI and acute ischaemic strokes

In a meta-analysis spanning 16 years, **Benjamin Bay, Christoph Waldeyer and colleagues** describe an increasing trend in acute ischaemic stroke, investigating predictors of stroke and rates of in-hospital mortality in patients undergoing PCI.

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SNAPSHOT