

52 mm (47–57) vs. 56 mm (49–61), $p=0.007$ and telesystolic diameters: 33 mm (28–37) vs. 38 mm (32–47), $p<0.001$, but a similar mean aortic gradient: 46 ± 15 mmHg vs. 46 ± 19 mmHg, $p=0.97$. Baseline AR ≥ 2 was less frequent in the low NTBNP group: 25% vs. 43%, $p=0.005$. After TAVI, AR ≥ 2 occurred in 27% and was significantly associated with increased 1-year ($p=0.001$) and 2-year mortality ($p<0.001$) only in the low NTBNP group (Figure).

Conclusion: More than mild AR after TAVI was associated with increased 2-year mortality only in patients with low baseline NTBNP. Our data suggest that the impact of AR after TAVI is absent in patients with remodelled ventricles and more severe baseline AR.

P5430 | BEDSIDE

A mid-term follow-up of a multicentre prospective study about life-threatening and major bleedings after TAVI

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Purpose: This work, aims to examine the incidence, associated with clinical and procedural factors, and the impact of peri-procedural bleeding during TAVI, in short and medium-term prognosis.

Methods: It is a multicentre and prospective study, which considers all consecutive patients who underwent TAVI from May 2008 to July 2012 at our centers. The serious bleeding, divided into life-threatening (LT) or mayor (MB) groups, are classified according to Varc document. The primary end point regards all-cause mortality after 30 days or at medium-term (mean 400 days) while, the secondary end points are cardiovascular death after 30 days or at medium term.

Results: The study have included 714 patients with a severe aortic valvular stenosis (average aortic valve area: 0.66 ± 0.6 cm²) and a mean age of 81.97 ± 5.8 years; besides many of these patients have showed a reduction of glomerular filtration rate (19.9%: GFR<30ml/min-46.1%:GFR<60ml/min). Peri-procedural haemorrhages, are reported in 242 patients (LT=130 MB=112) and 44 people have presented a minor bleeding. At 30 days, all-cause mortality was significantly higher in patients with LT and MB bleedings than in those without this complication (13.10% vs 8.90% vs 4.8% p 0.003), and equally after 400 days (37.4% vs 27.2% vs 17.3%; $p<0.0001$). The results are strengthened for cardiovascular death that was significantly elevated in patients who have presented serious haemorrhages at short and medium term (21.10% vs 10% vs 4.6%; $p<0.0001$ -20.5% vs 13.5% vs 5.9%; $p<0.0001$). At 30 days life-threatening (OR 3.3 CI 1.1-9.7 p 0.0026) and major (OR 3.5; CI 1.4-8.6 p 0.007) haemorrhages, along with GFR<30ml/min (OR 2.3 CI; 1.1-5.5 p 0.04), are showed as independent predictors of death, while at mid-term only impaired renal function is remained a significant predictor of mortality (OR 2.3; CI 1.1-3.9; p 0.01). Moreover, GFR<30ml/min (OR 1.6: CI 1.1-2.7; p 0.04) and prosthetic valvular diameter greater than 23 mm (26mm p 0.05; 29mm; p 0.04; 31mm p 0.09) are indicated as independent predictors of LT or MB bleedings, while transfemoral approach is appeared a protective factor (OR 0.42: CI 0.26-0.68; p 0.035).

Conclusions: Periprocedural bleedings during TAVI are common and they relates to an increased mortality after 30 days but not after mid-term follow up. Trans-femoral approach appears protective, while impaired renal function is the principal predictor of bleeding, thus allowing risk stratification and the selection of approach for these patients.

INTERVENTION / PERIPHERAL CIRCULATION

P5432 | BENCH

Olfactory testing in staff working in the cardiac catheterization laboratory

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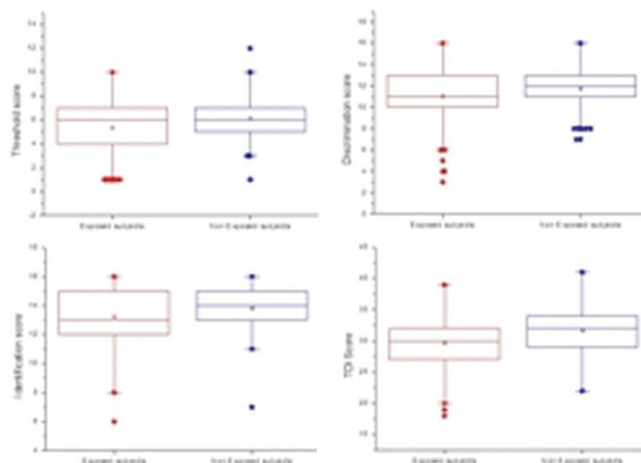
Background: In the absence of specific protection, invasive cardiologists receive a high lifetime head exposure, with organ doses in the 1 to 3 Sievert range (equivalent to the risk of 50,000 to 150,000 chest x-rays). Radiation exposure in this dose range can reduce neurogenesis in adult brain and negatively impact on olfactory function, whose impairment is a recognized early biomarker of neurodegenerative disease.

Aim: To assess psychological testing results in exposed subjects (ES) working as staff in the Cath Lab compared with non-exposed matched controls (NES).

Methods: A complete olfactory test battery (Sniffin' Sticks Extended test) was performed in 130 Cath Lab ES (60 males; age= 44.9 ± 8.7 years; 58 interventional

cardiologists, 60 nurses, 12 technicians). A control group of age- and gender-matched non-exposed subjects (NES) was also studied.

Results: ES showed lower scores in the Odor Threshold test ($p=.006$), Discrimination test ($p=.039$), Identification test ($p=.005$) and TDI (the sum of the previous 3 tests, $p<.001$), as reported in Figure. Subnormal scores of at least 1 of 3 odor subtests were present in 18/130 ES and 7/130 NES (13.8 vs 5.4%, $p<.001$). Significant correlations were found between Identification Score and years at Cath Lab ($r=-.18$, $p=.012$), this last parameter being also correlated with the overall TDI Score ($r=-.16$, $p=.048$).



Conclusions: In ES, olfactory testing showed mild impairment of identification (cortical), discrimination (bulb) and threshold (peripheral) function, somewhat correlated with radiation exposure in the Cath Lab. While further evidence is needed at this point, in the meantime head protection should be a mandatory good practice of safety in every Cath Lab.

P5433 | BEDSIDE

Incomplete stent apposition, multiple interstrut hollows and their related thrombus in in-stent restenosis lesions assessed with optical coherence tomography

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Background: It was reported that Incomplete Stent Apposition (ISA) and Multiple Interstrut Hollows (MIH) could be related to abnormal vessel wall reactions after Sirolimus-Eluting Stent (SES) implantation, which might be potential risk factors of stent thrombosis.

Still, little is known about the incidences of ISA and MIH in In-Stent Restenosis (ISR) lesions after various types of stent implantation.

Thus, ISR lesions of Bare-Metal Stent (BMS) and Drug-Eluting Stent (DES) were assessed with Optical Coherence Tomography (OCT).

Methods: Between May 2008 and Dec 2012, we performed OCT on 314 ISR lesions after BMS and DES implantations (BMS, 47; Sirolimus-Eluting Stent [SES], 140; Paclitaxel-Eluting Stent [PES], 49; Everolimus-Eluting-Stent [EES], 55; Biolimus-Eluting Stent [BES], 23), whose findings, ISA, MIH, and thrombus, were compared among the stents. MIH was defined as multiple hollows (the maximum depth >0.5 mm) existing between and outside the well-apposed stent struts. Thrombus was defined as masses (dimension ≥ 250 μ m) protruding into the vessel lumen at the site of ISA or MIH.

Results: Results are shown in Figure 1.

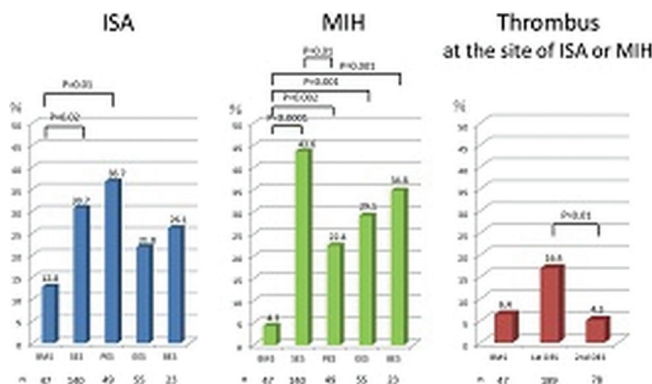


Figure 1. Incidences of incomplete stent apposition, multiple interstrut hollows and thrombus.

Conclusions: Abnormal vessel wall reactions may be more related to restenosis