Heart Team Recommendation Stratified by SYNTAX and STS Scores
- Low SYNTAX score defined as ≤ 22
- Low STS risk defined as surgical mortality <5%

STS – Society of Thoracic Surgeons; Int-High – Intermediate–High

POSTERS

Conclusions: Combination of SYNTAX with STS-risk score influences therapeutic decision-making in routine practice. A MHT approach resulted in recommendation for surgical revascularization in patients with low-STS risk regardless of SYNTAX score. Conversely, PCI was recommended more frequently in patients with high STS-risk regardless of SYNTAX. Further studies should focus on the clinical outcomes of these revascularization strategies.

TCT-326

In-Hospital and Long-Term Prognosis of Anemia on Admission in Patients Undergoing Percutaneous Coronary Intervention

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Background: Anemia is common before percutaneous coronary intervention (PCI). Numerous studies have shown the prognostic value of anemia in patients with acute coronary syndrome (ACS). Nevertheless, few studies have investigated the long-term impact and in-hospital prognosis of anemia on admission in patients undergoing PCI and constitutes the aim of this study.
Methods: We performed a single-center observational study with prospective follow-up of 759 consecutive patients undergoing PCI between 2007 and 2011. Anemia was defined according to OMS's criteria (hemoglobin <13 g /dl in men and <12 g /dl in women). We evaluated the relationship between anemia on admission with cardio-vascular events and long-term mortality (mean follow-up 26.5 ± 14.4 months).
Results: Anemia on admission was observed in 226 (23.5%) patients. Patients with anemia on admission were older (72 ± 10 vs. 64 ± 11 years, p <0.001), female (23.5 vs. 15.2%, p = 0.006) diabetic (47.3 vs. 31.5%, p <0.001) and hypertense (76.1 vs. 63.4%, p = 0.001). Most often patients were previously treated with anti-coagulants (14.2 vs. 7.3%, p = 0.003) antiplatelets (58.4 vs. 44.1%, p <0.001) had increased prevalence of acute myocardial infarction (AMI) on admission (59.7 vs. 49.2%, p = 0.008), lower creatinine clearance (66.5 ± 29.6 78.9 ± 23 ml/min/1.73m2, p <0.001) and higher levels of C reactive protein (35.5 ± 54.5 front 13.2 ± 25.6 mg/l, p <0.001). While being hospitalized patients had a higher incidence of contrast-induced acute kidney injury (15 vs. 6%, p <0.001), bleeding complications (19.5 vs. 8.6%, p <0.001), need for transfusion (6.6 vs. 6%, p <0.001) and mortality (5.3 vs. 1.5%, p = 0.003). During long-term follow-up they had more readmissions (59.7 vs. 47.7%, p = 0.002), AMI with ST segment elevation (4.5 vs. 1.7%, p = 0.027), stroke (5.8 vs. 2.1%, p = 0.008) cardiac mortality (8 vs. 2.8%, p <0.001) and all cause mortality (20.4 vs. 4.9%, p <0.001). Cox regression analysis showed that anemia was an independent predictor of all cause mortality (adjusted hazard ratio = 2.1, CI 95% 1.1-4.1, P = 0.028)

Conclusions: Patients with anemia on admission are numerous and have both poorer in hospital and long term prognosis and increased long-term mortality.

TCT-327

Late lumen enlargement - a potential new paradigm in vascular therapy

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Background: Local paclitaxel delivery to coronary arteries by application of a drug-coated balloon (DCB) has been shown to reduce in-stent restenosis (ISR) and late lumen loss in de novo lesions of small coronary arteries in comparison to other forms of PCI. While inherent healing processes after plane PTCA have led to a high rate of restenosis due to recoil and intimal proliferation, we observed an unanticipated decrease in residual stenosis while following patients after application of DCBs. It was the aim of this study to systematically study and quantify this phenomenon.
Methods: We evaluated 58 native coronary artery lesions mainly of small vessels (12 RCA, 21 LAD and 25 CX) in 56 consecutive patients directly after DCB intervention and 4 ± 2 months thereafter by quantitative coronary angiography. Treatment of ISR and left main lesions was excluded from this analysis. Mean vessel reference diameter was 2.59 ± 0.45 mm and initial stenosis grade was $69.1\pm14.0\%$. To exclude a vaso-motor tone effect a non-target vessel was evaluated as to the diameter change within the observation period and from identical cine frames (n=43). All PCIs were technically performed according to the recommendations of the German Consensus Group.
Results: Minimal and mean lumina of the lesion and the treated segment increased highly significantly. The late lumen increase of the target lesion within the observation period was 0.16 mm (1.75 ± 0.58 vs 1.91 ± 0.55 mm, p<0.05) and the diameter stenosis was further reduced from 33.8 ± 12.3 at end of index procedure to 26.9 ± 13.8 % (p<0.05) at follow up angiography, while there were no changes in the vessel diameter of the non target reference vessel (2.33 ± 0.60 vs 2.34 ± 0.61 mm, p = n.s.). No reintervention occurred in any of these patients, and MACE rate was 1.8%. There was only 1 binary restenosis.
Conclusions: Local application of paclitaxel by drug-coated balloons to native coronary arteries leads to late lumen enlargement in contrary to all other forms of PCI, which all lead to LLL.

TCT-328

Clinical Outcomes Based Upon Classification Using Appropriateness Use Criteria

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Background: The classification of patients using the appropriate use criteria (AUC) for percutaneous coronary intervention (PCI) is growing, however the AUC are criticized due to systematic and methodological issues. It is unclear to what extent clinical outcomes may change based upon procedures classified as appropriate, uncertain, or inappropriate.
Methods: Consecutive patients without acute coronary syndrome undergoing PCI at multiple hospitals across the University of Pittsburgh Health System were enrolled in a registry and followed prospectively since October 2011. Patient characteristics, in-hospital events, and 6 month follow up were recorded. Using national guidelines, cases were classified by the AUC criteria.
Results: A total of 442 cases were evaluated, among which 56.3% were Appropriate, 25.8% Uncertain, and 17.9% Inappropriate. There were no significant differences with regard to cardiovascular risk factors, except that patients classified as Appropriate were more likely to have a prior history of myocardial infarction or bypass surgery. Patients classified as Inappropriate were significantly more likely to not have prior stress testing (20.5% Appropriate vs. 53.2% Inappropriate, p<0.0001) and were more likely to be asymptomatic. Cases classified as Inappropriate were significantly more likely to be pre-operative cases prior to non-cardiac surgery (9.6% Appropriate vs. 29.1% Inappropriate, p<0.0001). There were no differences in lesion and procedural characteristics or significant differences in the 6-month outcomes of death, myocardial infarction, bleeding, in-stent thrombosis, or hospital readmission.
Conclusions: There are important characteristics of "Inappropriate" procedures that may drive interventional cardiologists to perform these procedures; however, the AUC do not allow for some factors to be considered in determining appropriateness. There were no significant differences in outcomes based upon AUC classification. The AUC criteria can be valuable but are limited and need to be refined to incorporate important factors that are often considered in routine clinical practice in the care of patients with coronary artery disease.

TCT-329

Cardiovascular Imaging Radiation in Coronary Artery Disease: Is It a Real Concern?

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Background: The number of cardiac diagnostic and therapeutic procedures involving ionizing radiation has increased rapidly in recent years, raising concerns about patients (pts) radiation exposure. The annual pts effective radiation dose (ED) should not exceed 1mSv, which is equivalent to 50 chest X-rays. We intend to estimate ED due to cardiac diagnosis and therapeutic exams in pts with chronic coronary artery disease(CAD) during follow-up.
Methods: CAD outpatients of a tertiary hospital who had at least one cardiovascular image exam were selected from 1999 to 2011. Patient evaluation of ED was accomplished through literature standard values and multiplied by the number of tests