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PS30.**Grading Abdominal Aortic Aneurysm Rupture Risk**

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Objectives: To generate a scoring system to grade the risk of rupture of an abdominal aortic aneurysm (AAA) in individual patients.

Methods: In a single hospital centre, a sequence of vascular patients was enrolled between August 2011 and December 2011. Abdominal aorta was classified as non-aneurysmatic (<3 cm), aneurysmatic (≥ 3 cm), or ruptured AAA by angio-CT scan. Angio-CT scans were coupled with a computational fluid dynamics (CFD) evaluation performed using open source software (ElmerSolver, CSC Institute of Technology, Finland). CFD criteria studied were: the oscillatory shear index (OSI), the time averaged wall shear stress (TAWSS) and the residence relative time (RRT) on both 2D and 3D models. AAA rupture predictors (clinical, aortic diameter and CFD parameters) were analysed and a scoring system was generated using Arabic numerals for all significant variables in order to grade the individual patient risk of rupture.

Results: There were 143 patients examined. Mean age of the patients was 74 years, 111 of the patients were male. 73 patients suffered from an AAA (of which 18; 25% were ruptured AAAs) and 52 had a non-aneurysmatic aorta. The mean diameter and its standard deviation (SD) in the normal aorta, AAA, and ruptured AAA groups were 2.06 (0.52) cm, 5.11 (1.67) cm, and 8.27 (2.13) cm respectively ($P > .001$). The 2D OSI index was the best CFD criterion following multivariate analysis and ROC curves evaluation. An AAA was deemed at low, moderate, or high risk of rupture, respectively, according to whether the risk score was defined as AAA I (when the total score for all variables was < 6), AAA II (6-14) or AAA III (≥ 15). The only protective factor was found in diabetes (OR = .760; CI: 0.643-0.897).

Conclusions: The risk score for AAA rupture herein reported seems to be a useful tool to help predict AAA rupture, but needs to be validated in independent cohorts at a variety of centres before it can be recommended for application, preferably in a randomized comparison with other predictive models.

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PS32.**Management of Symptomatic Thrombus in Non-Atherosclerotic/Non-Aneurysmal Aorta**

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Objectives: To report our experience of thrombo-embolic disease from non-aneurysmal/atherosclerotic aorta.

Methods: A retrospective review of 63 patients with acute embolic lower limb or visceral ischemia from January 2012-December 2012 revealed Ten patients (M:F = 4:6) (mean age, 39.2 years) with a major thrombo-emboligenic source within an otherwise normal aorta after thorough evaluation of heart and great vessels.

In four patients thrombus was located in thoracic aorta, 2 in suprarenal abdominal aorta involving visceral vessels and four in infrarenal aorta. End organs affected by acute ischemia were: lower limbs (seven) (two bilateral) (L:R = 3:6), Visceral (three) (R Renal, one; SMA, two; celiac, three)

Thrombus involving Thoracic aorta (n = 4) were treated with a stent-graft. In supra-renal abdominal aorta both patients underwent laparotomy with trapdoor aortic thrombo-emblectomy (Fig). Of the three patients with infra renal aortic thrombus, one underwent covered stenting, one underwent open aortic thrombectomy with interposition graft, one was managed on oral anticoagulants. Post-thrombectomy, there was no underlying aortic wall defect.

Results: One patient with small bowel and ascending colonic ischemia required massive bowel resection died of sepsis and multiorgan failure, one patient needed a below knee amputation for irreversible ischemia. No patient had any further embolic episode at a median follow up of 160 days.

Conclusions: Nonatherosclerotic, nonaneurysmal aortic thrombus is an uncommon but important source of non-cardiogenic embolus. It appears to occur in young adults. Coverage of the aortic thrombus with a stent-graft, when feasible, appears to be an effective and safe procedure. When the thrombus lies adjacent to visceral vessels an open trapdoor aortic thrombectomy, under direct visualization, is an effective solution to deal with the acute ischemia and its cause.

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PS34.**A Comparison of the Early, Transitional and Modern Eras of Endovascular Aneurysm Repair (EVAR):**