

studies that followed patients for less than a year, compared with studies with follow up over a year. Patient important outcomes (death, pulmonary embolism, quality of life) were poorly reported and their estimates were imprecise. The quality of included studies was moderate to low.

Conclusions: Very low quality evidence suggests that surgical thrombectomy decreases the incidence of postthrombotic syndrome and increases venous valve competency; catheter-directed thrombolysis increases venous patency and valve competency. Additional rigorous research is required to determine the relative superiority of these technologies and their impact on patient-important outcomes.

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PP90.

Incidence and Characteristics of Venous Thromboembolic Disease During Pregnancy: A Contemporary Series

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Objective: To evaluate the incidence and characteristics of venous thromboembolic events (VTE) associated with pregnancy in a contemporary patient series.

Method: We performed a retrospective review of 33,311 deliveries between June, 2003 and June, 2008. Patients with objective documentation of a VTE during pregnancy or the three month postnatal period were identified from hospital discharge ICD-9 codes. Diagnosis of deep venous thrombosis (DVT) was largely made by Duplex ultrasound and pulmonary embolism (PE) by computerized tomographic angiography (CTA).

Results: Of 33,311 deliveries during the study period, 74 patients (0.22%) had a VTE. There were 40 incidents of DVT (0.12%) and 37 incidents of PE (0.11%). DVT involved the iliac veins (6), the femoral or popliteal veins (16), the infrapopliteal veins (17) and the axillary vein (1). Most (57.5%) DVT involved the left lower extremity. Only five (6.8%) of these 74 patients had a prior history of VTE. Thirty-eight (51.6%) of the VTEs occurred in the postnatal period, 33 (87%) within one week of delivery. Sixty-eight percent of the postnatal VTEs were in patients undergoing cesarean section. Among patients with VTE during pregnancy, there were 28% in the first trimester, 25% in the second, and 47% in the third. Events were distributed among maternal age groups as follows: 26% age 13-24, 50% age 25-34 and 24% age 35-54. Patients with a VTE during pregnancy were treated with low molecular weight or unfractionated heparin. Most postnatal patients were treated with subcutaneous low molecular weight heparin and coumadin. Six IVC filters were placed in patients with bleeding complications from anticoagulation. There were no deaths.

Conclusions: Comparing our results to historic controls (DVT: 0.04-0.14% and PE: 0.003-0.04%), the incidence of DVT in pregnancy has not changed significantly. We note, however, that the incidence of pulmonary embolism in our series is higher than previously reported. CTA has been utilized for the diagnosis of PE for only the past decade. The increase in the rate of PE in the current series may be due to the higher sensitivity of CTA when compared with previous diagnostic modalities.

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Other

PP91.

Prediction of Major Adverse Cardiac Events in Vascular Surgery: Are Cardiac Risk Scores of Any Practical Value?

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Objective: Disease-specific preoperative scoring systems are often used to predict postoperative cardiac complications. We retrospectively evaluated the accuracy of two cardiac risk scores in the prediction of major adverse cardiac events after vascular surgery.

Methods: Consecutive elective reconstructive arterial surgery procedures were "scored" according to the Revised Cardiac Risk Index and the Eagle criteria. Two "generic" risk scoring systems, ASA grade and the physiology Portsmouth POSSUM (P-POSSUM) score, were also documented for comparison. Statistical analysis was by Receiver Operator Characteristic (ROC) curves.

Results: After 344 reconstructive arterial surgical procedures, eighteen patients suffered a major adverse cardiac event (5.2%; 95%CI=2.8-7.58 - four fatal). The Revised Cardiac Risk Index (AUC (95%CI)=.68 (.57-.83), P= .009) and the Eagle criteria (AUC (95%CI)=.73 (.57-.8), P=.001)

were no better than P-POSSUM (AUC (95%CI)=.82 (.73-.91), P<.001) and ASA grade (AUC (95%CI)=.67 (.56-.78), P=.016) in predicting major adverse cardiac events. Age was as good as any scoring system, with an AUC of .79 (.68-.89). Of the variables included in the two cardiac scoring systems, only age and history of ischaemic heart disease were associated with major adverse cardiac events in our patients.

Conclusion: Cardiac risk scores were no better than generic risk scoring systems in predicting major adverse cardiac events. Poor performance may be due to differences between our patient population and those in which the scores were developed, and to improved perioperative management of cardiac risk.

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PP92.

Perioperative Asymptomatic Cardiac Damage after Endovascular Abdominal Aneurysm Repair is Associated with Poor Long-term Outcome

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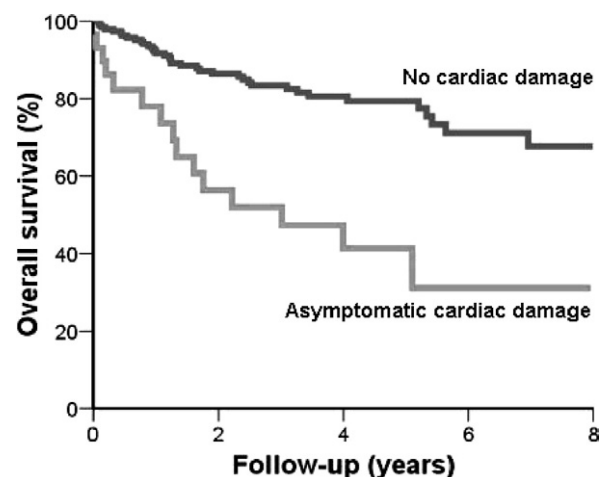
Background: Endovascular abdominal aortic aneurysm (AAA) repair is associated with a decreased incidence of perioperative cardiac complications compared to open repair. However, endovascular AAA repair is not associated with long-term survival benefit. Intensified care during follow-up might improve prognosis.

Aim: To assess the impact of perioperative asymptomatic cardiac damage after endovascular AAA repair on long-term prognosis.

Methods: In 228 patients undergoing elective endovascular AAA repair routine sampling of cardiac troponin T (cTnT) and ECG recording was performed on days 1, 3, 7, and at the day of discharge. Elevated cTnT was defined as serum concentrations ≥ 0.01 ng/ml. Asymptomatic cardiac damage was defined as cTnT release without symptoms and/or ECG changes. The median follow-up was 2.9 years and survival status was obtained by contacting the civil service registry.

Results: A total of 29/228 (12.7%) patients had cTnT release, median 0.08 ng/ml, of whom 24 (83%) were asymptomatic and without ECG changes. Patients with asymptomatic cardiac damage had a higher mortality rate after 2.9 years compared to those without perioperative cardiac damage (56% vs 18%, $p<0.001$, figure). Also after adjustment for risk factors and medication use applying multivariate Cox regression analysis, asymptomatic cardiac damage was associated with a 3.6 fold increased risk for mortality (HR 3.6, 95% CI 1.8-7.1) while statin use was associated with a reduced risk for long-term mortality (HR 0.58, 95% CI 0.3-0.9).

Conclusion: Asymptomatic cardiac damage in patients undergoing endovascular AAA repair is associated with poor long-term outcome. Routine perioperative cardiac screening after endovascular AAA repair might be warranted.



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