prandial sugar (p<0.001); serum cholesterol (p<0.001) and HbA1c (p<0.005).

Conclusions: The clustering of risk factors called metabolic syndrome (or probably better dysmetabolic syndrome) confers an increased risk for accelerated atherosclerosis in diabetic individuals predisposing them to macrovascular disease and hence considerably contributing to both morbidity and mortality associated with it. Increase carotid IMT can be a useful predictor of macrovascular disease in newly detected type-2 diabetes.

Author Disclosures: I. Ahmad: Nothing to disclose; S. Rizvi: Nothing to disclose; M. Siddiqui: Nothing to disclose; E. Ullah: Nothing to disclose; S. Wahab: Nothing to disclose.

PS158.

Use of Ultrasound for Percutaneous Endovascular Aortic Aneurysm Repair (PEVAR) Reduces Rate of Conversion to Femoral Cutdown

Jose M. Sarmiento1, Paul J. Wisniewski2, Natalie T. Do3, Jeff M. Slezak4, Majid Tayyarah5, Paul K. Aka5, Trung D. Vo5, Jeffrey H. Hsu5. 1University of California, Riverside, Division of Biomedical Sciences, Riverside, CA; 2Arrowhead Regional Medical Center, Department of General Surgery, Colton, CA; 3Western University of Health Sciences, College of Osteopathic Medicine of the Pacific, Pomona, CA; 4Kaiser Permanente of Southern California, Department of Research and Development, Pasadena, CA; 5Kaiser Permanente Fontana Medical Center, Department of Vascular Surgery, Fontana, CA

Objectives: This study was conducted to determine the effect of ultrasound-guided percutaneous access for endovascular aortic aneurysm repair (PEVAR) on conversion to open repair by femoral cutdown. We also analyzed other possible risk factors for unsuccessful PEVAR as well as our center’s PEVAR outcomes.

Methods: This is a single-center, retrospective review of 101 patients who underwent PEVAR between January 1st, 2005 and July 31st, 2009 (56 months). Risk factors that were evaluated for unsuccessful PEVAR included gender, age (<65 and ≥66), ultrasound guidance percutaneous access, mechanical failure, AAA size, and the following comorbidities: diabetes, hypertension, vessel calcification and obesity (BMI ≥ 30). The outcome parameters that we measured were length of stay in the hospital, endoleak rate, intraoperative transfusion rate, wound infections, and bowel ischemia.

Results: There were 10 (9.9%) conversions from percutaneous to femoral cut down yielding a success rate of 90.1% for a total percutaneous approach. Each converted patient had one groin converted, resulting in a cutdown rate per groin of 10/202 (5%). There were no 30-day mortalities. Univariate analysis showed that hypertension (p=0.261), age ≥ 66 (p=0.741), current smoking history (p=0.649), past smoking history (p=0.093), diabetes (p=0.908), vessel calcification (p=0.8281) and BMI ≥ 30 (p=0.052) did not significantly predict conversion to EVAR. Mechanical failure significantly predicted conversion to cut down EVAR (p = 0.0002) while ultrasound-guided percutaneous access influenced successful PEVAR (p = 0.030). Multivariate analysis showed that mechanical failure significantly predicted conversion to cut down EVAR (p = 0.003) and ultrasound-guided percutaneous access influenced successful PEVAR (p = 0.040) after adjusting for smoking history and obesity.

Conclusions: PEVAR is a viable option for aortic aneurysm repair that may be improved with ultrasound-guided percutaneous access by reducing the rate of femoral cutdowns.


PS160.

Does the Modality of Surveillance Imaging Influence the Pick-up Rate of Asymptomatic Secondary Interventions following Endovascular Aortic Aneurysm Repair (EVAR)?

Emiliano Chiscio, Francesco Setacci, Gianmarco de Donato, Carlo Setacci. Vascular and Endovascular Surgery Unit, Siena, Italy

Objectives: The literature reported that surveillance imaging initiated secondary interventions (SIR) in 1.4-9% of cases following Endovascular Aortic Aneurysm Repair (EVAR). This prospective study had the objective of evaluate if the modality of surveillance imaging influence the pick-up rate for asymptomatic SIR.

Methods: Two EVAR surveillance protocols were compared at the same vascular center. Protocol I was performed between 01/2003 and 12/2006 and consisted of a color Duplex ultrasound scan (CDU) plus CT angiography (CTA) 1 month after the procedure and every 6 months thereafter. Protocol II was performed between 01/2007 and 06/2010 and consisted of CDU plus CTA at the first month post-operative and a CDU plus 4-view plain abdominal films (RX) every 6 months thereafter. CTA was carried out only in definite conditions (increase of the aneurismatic sac >5 mm within 6 months, onset or persistence of any kind of endoleak, suspect of structural graft failures/migration). Asymptomatic SIR was considered when picked up by imaging alone on an elective basis before development of any symptom.

Results: 376 and 341 consecutive patients were enrolled in protocol I and II, respectively. The freedom from aneurysmal rupture, the overall freedom from
SIR and the pick-up rate for asymptomatic SIR at three years was 98.3% and 98.7% (p=0.456), 82% and 83.5% (p=0.876) and 48% (n=33/68) and 45% (n=25/56) (p=0.34) respectively in protocol I and II. The two protocols initiated asymptomatic SIR in 7.5% of patients (mean 197; 35-1543 days). Symptomatic SIRs are more likely to occur within 30-day (mean 22; 1-1132 days) from the deployment.

Conclusions: Our study showed that the type of surveillance imaging modality did not appear to influence the SIR rate while symptoms still trigger a significant rate of SIR following EVAR.

Author Disclosures: E. Chisci: Nothing to disclose; G. de Donato: Nothing to disclose; C. Setacci: Nothing to disclose; F. Setacci: Nothing to disclose.

PS162.
Greater Saphenous Vein Assessment Using Computed Tomographic Angiography
Kelly Kempe¹, William Harkrider², Arturo D. Gonzalez², Michel E. Comeaux². ¹Louisiana State University Department of Surgery, New Orleans, LA; ²University Medical Center, Lafayette, LA

Objectives: The greater saphenous vein (GSV) is incidentally visualized on computed tomographic angiography (CTA). While the GSV is not the subject of the CTA study, its presence, anatomy and size can be assessed. This may assist in preoperative venous utilization planning.

Methods: A retrospective review of 50 patients who had a CTA with runoff of bilateral lower extremities was performed. The machine used in the study was a VCT 64 channel. The GSV was thoroughly followed using strict anatomical criteria in the axial views. Each vein diameter was measured at the sapheno-femoral junction, mid thigh, patella and mid calf. Vein size was recorded as either greater than or less than 2mm. The vein was logged as surgically absent if the GSV was not visualized and surgical clips were placed. Relevant clinical variables were analyzed.

Results: Fifty patients and 98 legs were included in the study. Two patients had above the knee amputations and these legs were omitted. Of the 98 legs in our study, 8 GSV’s were surgically absent. Ninety veins were available for characterization. Seventy-five veins (88%) were greater than 2 mm in its entirety and 15 (17%) veins were less than 2 mm in some major portion of the vein. CTA identified 100% of the saphenous veins.

Conclusions: The data suggests that if CTA is the arterial imaging modality, the GSV is incidentally visualized and these images may be utilized in surgical planning. The GSV is visualized secondary to the tissue fat interphase and no additional contrast, radiation or cost ($) is necessary. Further comparison studies with ultrasound are needed to confirm the size, continuity and quality of the GSV.

Author Disclosures: M. E. Comeaux: Nothing to disclose; A. D. Gonzalez: Nothing to disclose; W. Harkrider: Nothing to disclose; K. Kempe: Nothing to disclose.

PS164.
A Simplified Stratification System is Effective at Selecting Patients with a High Likelihood of Hypercoagulable Disorders
Joseph Naoum, Tiffany Street, Nayef Chahine, Jean Bismuth, Hossam El-Sayed, Heitham Hassoun, Eric Peden, Mark G. Davies, Alan B. Lumsden. The Methodist Hospital, Houston, TX

Objectives: Thrombosis of vascular conduits or native vessels remains a challenging problem affecting the vascular patient. Hypercoagulable disorders can lead to deep vein thrombosis (DVT), arterial thrombosis or embolization, and early or recurrent bypass graft failure. Patients at risk for a hypercoagulable vascular event have been underestimated and identifying those patients can be important for their management.

Methods: We reviewed clinical data on 300 consecutive patients. A hypercoagulable workup was performed if patients presented with (1) early bypass /graft thrombosis (<30 days), (2) multiple bypass / graft thromboses, (3) a history of DVT, Pulmonary embolus (PE) or native vessel thrombosis. Relevant clinical variables were analyzed.

Results: 85 patients (47 women; age 53 ± 16 years, range 16 - 82 years) had one of the defined conditions and underwent a hypercoagulable evaluation. Screening was done in 9% of patients for early bypass graft thrombosis, 60% of patients were screened because of multiple bypass or graft thromboses, and 31% had a previous history of DVT, PE or native vessel thrombosis. 62 patients (73%) had an abnormal hypercoagulable profile, 25 patients had only one abnormality, 21 patients had 2, 8 patients had 3, 3 patients had 4, 4 patients had 5, and 1 patient had 6 abnormal values, respectively. An elevated homocysteine level was present in 38% of patients, lupus anticoagulant was present in 34%, heparin antibodies in 22%, functional protein S deficiency in 20%, antithrombin III deficiency in 15%, functional protein C deficiency in 11 %, anticardiolipin antibodies in 8%, and Factor V Leiden mutation in 2%, respectively.

Conclusions: Hypercoagulable disorders are not uncommon in patients in a vascular surgery practice and its incidence may not be well recognized. Patients who present with either early graft thrombosis, repeated graft thrombosis, and venous or native vessel thrombosis warrant a hypercoagulable evaluation.

Author Disclosures: J. Bismuth: Nothing to disclose; N. Chahine: Nothing to disclose; M. G. Davies: Nothing to disclose.