

operative monitoring strategies for those at greatest risk of complications.

#### **0216: PRIMARY FAILURE RATES OF ARTERIO-VEIN FISTULAS FOR DIALYSIS: HOW DO WE COMPARE TO THE NATIONAL KIDNEY FOUNDATION (NKF) KIDNEY DISEASE OUTCOMES QUALITY INITIATIVE (KDOQI) GUIDELINES?**

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**Aim:** Vascular access for haemodialysis is achieved through arteriovenous fistula (AVF) formation. Complications are frequently encountered and maintaining functional access remains problematic. This study aims at analysing whether our practice at Leeds General Infirmary conforms to the National Kidney Foundation (NKF) guidelines on acceptable AVF primary failure rates.

**Methods:** A retrospective review of a prospectively collected patient database over a 12-month period was undertaken. Patients who underwent revision of an existing graft were excluded. The primary objective was to ascertain the proportion of usable AV fistulas at 30-days, 6-months and 1-year from the date of insertion.

**Results:** One hundred and twenty four patients (85:39 M:F, Median age 64 years [21-87]) underwent creation of a new AVF between May 2012 and April 2013. Forty seven radio-cephalic, 48 brachio-cephalic, 28 basilic vein transposition (BVT) and 1 brachio-axillary PTFE fistulas were created. Primary failure rates at 30-days, 6-months and 1-year were as follows: radio-cephalic (0%,27%,50%), brachio-cephalic (11%,31%,53%), BVT (0%,21%,54%). The most common cause of failure was stenosis (35%).

**Conclusion:** Our practice conforms to guidelines established by the NKF. Basilic vein transposition and brachio-cephalic fistulas exhibit a lower 30-day primary failure rate than radio-cephalic fistulas and may be preferred as method of vascular access.

#### **0248: AN AUDIT ON FOLLOW UP DUPLEX SCANS TO ASSESS GRAFT PATENCY FOLLOWING INFRA-INGUINAL ARTERIAL BYPASS SURGERY**

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**Aim:** The American College of Cardiology/American Heart Association (ACC/AHA 2011) guidelines recommend the routine use of duplex ultrasound surveillance after infra-inguinal arterial bypass surgery in order to detect early stenosis and prevent graft failure. Our aim was to benchmark our graft-surveillance practice against these guidelines.

**Methods:** We retrospectively reviewed six-week postoperative arterial duplex ultrasound requests for all infra-inguinal arterial bypass procedures performed over a six-month period at a tertiary vascular centre in 2014. Data collection included demographics, operative details, graft complications and follow-up imaging.

**Results:** Thirty-two infra-inguinal bypass procedures were identified during the study period. These included 18 femoral-popliteal, 12 femoral-distal and 2 popliteal-distal bypasses. 69% of cases were male and 78% of procedures were performed using venous grafts. Overall, requests for six-week post-operative duplex scans were organised in only 50% of cases upon patient discharge. Stenotic lesions requiring further intervention were identified in 15% of grafts on surveillance.

**Conclusion:** Our study identified low compliance with the ACC/AHA guidelines in relation to graft surveillance. This can potentially increase the risk of graft failure and limb loss. We therefore suggest a programme of junior staff awareness, surveillance initiation at the point of discharge, and further audit-based evaluation of our practice.

#### **0337: FRAILITY PREDICTS POOR OUTCOME IN PATIENTS UNDERGOING LOWER LIMB INFRAINGUINAL SURGICAL REVASULARISATION**

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**Aim:** Given the changing demographics of the population, frailty is becoming an increasingly recognised concept, associated with poor outcome in a number of surgical conditions. No study has yet determined

the effect of frailty following infrainguinal lower limb bypass surgery (ILLBS).

**Methods:** Data was collated on a consecutive cohort of patients ( $\geq 65$  years of age) undergoing ILLBS. Patient demographics, surgery specific factors and frailty specific data was collated. Frailty severity was determined using a modified Vascular Frailty Score (VFS: 0 - no frailty / 6 - severe frailty). Primary outcome measure was length of stay (LOS), with secondary outcome being mid-term mortality.

**Results:** 83 patients were assessed (median age 74 yrs; 32 women). Median LOS was 9 days. Overall median VFS was 1. 26 had a VFS of 0, 21 a VFS of 1, 26 a VFS of 2 and 10 a VFS of 3 or 4. Increasing VFS score equated to a longer LOS ( $p < 0.01$ ) and increased mortality rate ( $p < 0.01$ ), but there was no association with age or indication for surgery.

**Conclusion:** Frailty specific factors appear to predict a poorer outcome in older patients undergoing ILLBS. Some of these are reversible and amenable to intervention to improve outcome.

#### **0343: CONTROVERSY: IS IT TOO LATE FOR A UK NATIONAL ABDOMINAL AORTIC ANEURYSM SCREENING PROGRAM?**

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**Aim:** The NHS Abdominal Aortic Aneurysm (AAA) Screening Program aims to reduce premature death from ruptured AAAs by up to 50% over 10 years. However, the incidence of clinically-relevant AAAs in men appears to be declining. This study aims to identify the changing pattern of, and mortality from, ruptured AAA (rAAA).

**Methods:** Data was obtained from the Public Health Wales Observatory, Patient Episode Database for Wales, of patients admitted alive with a rAAA over a five year period. This data was compared to a publication of similar data (Basnyat et al.) for Wales in 1997.

**Results:** For 1996-97 233 patients (158 males) presented to Welsh hospitals with a rAAA. In comparison, in 2007 there were 163 patients (132 male) and in 2013 115 (78 male). In 1996-97 133 patients underwent surgery, 48 (36%) survived compared to 66 (51%) operated and 35 (27%) surviving in 2012-13. Lastly in 2012-13 patients with rupture were older, 48%  $> 80$ , compared to 33% in 1996-97.

**Conclusion:** Since the introduction of a national screening program the number of patients presenting with a rAAA has more than halved, while age of presentation with rAAA has increased. Outcomes for patients undergoing emergency repair of a rAAA remains poor.

#### **0345: THE EFFECT OF A SIMULATION TRAINING PACKAGE ON SKILL ACQUISITION FOR DUPLEX ARTERIAL STENOSIS DETECTION**

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**Aim:** Duplex ultrasonography is a valuable diagnostic tool. This study evaluates the role of a simulation-training package on ultrasound skill acquisition.

**Methods:** 19 novices measured stenosis in a simulated vessel using both peak systolic velocity ratio (PSVR) and diameter reduction (DR) methods before and after using a simulation-training package. The package consisted of a phantom, instructional videos, duplex ultrasound objective structured assessment of technical skills (DUOSATS) tool and a ultrasound scanner. Time, percentage error, DUOSAT scores and global rating scores before and after training were compared.

**Results:** Subjects exhibited significant improvements when comparing pre and post training DUOSAT scores (Pre 17 vs. Post 30,  $p < 0.01$ ), global rating score (Pre 1 vs. Post 4;  $p < 0.01$ ), percentage error using both the DR (Pre 12.6% vs. Post 10.3%;  $p = 0.03$ ) and PSVR (Pre 60% vs. Post 20%;  $p < 0.01$ ) methods.

**Conclusion:** Novice subjects developed the ability to both acquire and interpret arterial Duplex images following training using a simulation-training package.

#### **0391: PERIOPERATIVE OPTIMAL MEDICAL THERAPY IN VASCULAR SURGERY**

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