Purpose: To determine if intraoperative cell salvage reduces the need for postoperative allogenic blood transfusion, assess any adverse events and its effect on postoperative stay in primary hip arthroplasty.

Method: Between 2009 and 2010, 77 patients underwent primary total hip arthroplasty. Intraoperative cell salvage was used in 38 patients and not used in 39 patients. We collected data on patient demographics, ASA grade, preoperative and postoperative haematologic features, number of units of packed red cells transfused and the volume of intraoperative reinfused cell salvaged blood was recorded. Total inpatient stay and any post-operative adverse events were recorded.

Results: No patients in the cell salvage group required postoperative allogenic blood transfusion compared to three patients (7.7%) in the conventional group. Postoperative haemoglobin drop was lower in the cell salvage group (2.57 vs. 3.3 g/dl). The mean length of postoperative inpatient stay was shorter in the cell salvage group and (5.1 vs. 6.41 days). An average of 361mls of cell salvaged blood was reinfused (110 – 900mls).

Conclusions: Intraoperative cell salvage in patients undergoing primary total hip arthroplasty reduces the need for post operative allogenic blood transfusion with no increase in adverse events when compared to conventional measures of blood preserving techniques.

0177 THE EUROPEAN WORKING TIME DIRECTIVE – SHIFTING THE EMPHASIS ON TRAINING
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Aim: The EWTD has been criticised across all ‘craft’ specialties including general surgery due to shifts that result in lost training time and reduced continuity of care. We investigated whether a new on-call rota for general surgical middle grades could safely replace an existing shift system and result in increased training opportunities.

Methods: We changed an 8-cell full shift pattern into a 7-cell 24 hour non resident rota for 8 weeks. The SpR remained on site and contactable at all times. The following were recorded before and during the trial; number of training sessions (endoscopy, day surgery, theatre and CEPOD lists), number of operations performed, disturbance at night.

Results: There were no patient safety problems. There was an increase in the mean number of training sessions from 17.4 to 24.6 (p=0.02). There was a trend towards more procedures being performed (mean increase from 34 to 37; p=0.7). Disturbance at night was minimised, and trainee and trainer satisfaction improved.

Conclusions: Moving to a 24-hour on-call rota increases training opportunities with continuity of care and trainer and trainee satisfaction with no evidence of patient harm. We have therefore changed to a non resident on call rota for Specialist Registrars.

0180 INVESTIGATIONS OF NEUROPHYSIOLOGY IN HUMAN HEALTH AND DISEASE: EFFECTS OF MENTAL ARITHMETIC AND MUSIC ON EEG
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Aim: A study investigating effects of mental arithmetic and classical music on EEGs using new ADI equipment.

Methods: EEG was recorded from 17 healthy undergraduates during eye opening, mental arithmetic tasks and while listening to classical music, using closed eyes as the control. EEG was recorded from the left frontopolar-occipital (O1-Fp1) and parietal (P8-P7) bipolar electrode positions was filtered into frequency bands delta (0.1-3.5Hz), theta (4-7.5Hz), alpha (8-13Hz), beta (14-30Hz) and gamma (30-50Hz) using LabChart 7 software for analysis.

Results: Eye opening showed decreased alpha activity. The addition arithmetic task showed a significant decrease in alpha amplitude (30.6%; P<0.05 in O1-Fp1 and 27.4%; P<0.05 in P8-P7) and power (3.5%; P<0.001 in O1-Fp1 and 2.5%; P=0.001 in P8-P7). The multiplication task showed a similar decrease in alpha amplitude (33.9%; P<0.001 in O1-Fp1 and 29%; P<0.001 in P8-P7) and power (2.1%; P<0.001 in O1-Fp1 and 3.1%; P<0.001 in P8-P7). Listening to classical music decreased beta power (1.5%; P<0.01 in O1-Fp1).

Conclusions: Despite artefacts, the ADI equipment has recorded EEG data and shown significant differences between groups as expected. Future EEG research using this new equipment could be simpler and more cost effective. Furthermore, being more patient-friendly, it may increase efficiency in terms of neuropsychiatric diagnoses.

0184 TRAINER EXPERIENCE IN GENERAL SURGERY: CAN WE MAXIMISE TRAINING OPPORTUNITIES FOR TRAINEES? A NINE YEAR SURVEY OF 1386 CASES
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Aims: The Calman report and European Working Time Regulations have reduced time available for training. Consequently, accredited trainers must optimise available training opportunities.

Methods: The operative logbook of a consultant general and vascular surgeon was reviewed retrospectively over a nine year period (2001-09). Data relating to all general surgical procedures were extracted. A training opportunity was defined as the trainee performing part or all of a procedure under supervision. Results were stratified by year and subgroup analysis was performed for appendicectomy, cholecystectomy, hernia repair, thyroid/parathyroidectomy and urgent laparotomy.

Results: The median total procedures each year was 151 (range 91-195), with a rise in the proportion used for training (27.9%(2002); 60.7%(2009), Pearson r=0.87 [p=0.001]). An increase in the proportion of training opportunities was seen in cholecystectomy (28.0%(2002); 67.6%(2009), Pearson r=0.62 [p=0.001]) and hernia repair (26.5%(2002); 65.3%(2009), Pearson r=0.67 [p=0.048]). A non-significant increase was seen in thyroid/parathyroidectomy (25.0%(2002); 45.0%(2009), Pearson r=0.11 [p=0.778]) and urgent laparotomy (45.0%(2001); 73.3%(2009), Pearson r=0.54 [p=0.133]).

Conclusions: Although alterations in employment regulations have changed elements of surgical training, sufficient experience can be achieved with a dedicated trainer and motivated trainee. Trusts must be aware of the resource implications inherent in delivering more concentrated training experiences.

0185 ENDO-VENOUS LASER THERAPY (EVLT) FOR TREATMENT OF SYMPTOMATIC VARICOSE VEINS: A RETROSPECTIVE AUDIT OF 970 CASES EXPERIENCE AT UNIVERSITY HOSPITAL LEWISHAM
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Objectives: EVLT is an established effective treatment of varicose veins. Its aim is to accomplish haemodynamic elimination of incompetent truncal veins through endothermal damage of the vein wall causing occlusion. We analysed all cases of EVLT at University Hospital Lewisham since 2007.

Methods: All patients attending for EVLT for incompetent truncal veins, confirmed on duplex venography, at University Hospital Lewisham between January 2007 and June 2010 were identified using electronic theatre records. All procedures were performed using 810 nm continuous wave diode lasers with power 14watts (continuous pull-back approach) under either local or general anaesthesia. Symptomatic recurrences requiring further EVLT were identified from medical notes and differences in procedural indices were analysed using Minitab15.

Results: 970 EVLT procedures (unilateral 873, bilateral 97) were performed in the study period. Mean age of patients was 55±15years. Mean length of lasered vein was 27±0.3cm with a mean energy of 74±17joules/cm (Range 25.4-136.7 joules/cm). There were 4(0.41%) symptomatic recurrences requiring further EVLT. No significant differences were found between EVLT successes and failures (Energy usage: 74.6±0.5 vs. 76.8±2.9joules/ cm; p=0.482, Lasered vein length 27±0.3 vs. 27.5±4cm; p=0.903 respectively).

Conclusions: EVLT is an effective procedure for occlusion of varicose veins with very low symptomatic recurrence.

0187 VALIDATION OF A NOVEL TECHNIQUE TO EXTRACT AND PRESERVE URINARY RNA IN A HOSPITAL SETTING
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