complication observed in 26% of patients (n=6). The air leak persisted for up to 19 hours after probe removal. In 74% (n=17) patients there was significant discomfort requiring sedation with TOE probe insertion. The passage of the TOE probe had no significant effect on pericardial drain loss. With sedation there was little alteration in haemodynamic parameters during the echocardiographic examination. One patient had non sustained arrhythmia with passage of the probe. There were no problems noted in association with its use as a mediastinal drain.

*Conclusion:* The SEE cannula provides a new approach to cardiac imaging in the postoperative cardiac surgical patient. Persistent air leaks were commonly noted although there was no morbidity associated with this. The discomfort associated with passage of the TOE probe was alleviated by sedation and no significant haemodynamic changes occurred during its use.

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## A PROSPECTIVE RANDOMIZED CONTROLLED STUDY COMPARING COMBINED GENERAL AND EPIDURAL ANAESTHESIA WITH GENERAL ANAESTHESIA ALONE FOR CORONARY ARTERY BYPASS SURGERY

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This study examined the hypothesis that combined general and epidural anaesthesia compared to general anaesthesia alone, for elective coronary artery surgery, would have an effect on three major end-points: 1. Myocardial ischaemia, 2. Time to extubation and 3. Visual Analogue Scale pain scores (VAS).

Inclusion criteria—patients having elective first time coronary artery bypass surgery who had given written informed consent. Exclusion criteria -contraindications to epidural anaesthesia including coagulation abnormality. 120 patients were included in the study and randomized to epidural or control groups. Patients randomized to the epidural group had a high thoracic epidural catheter inserted the day before surgery. A standard fast-track anaesthesia technique was used for both groups and early extubation was attempted in all patients using standardized criteria. The epidural group received a continuous ropivacaine and fentanyl infusion following an initial bolus and the control group received additional morphine following bypass. Troponin I and cardiac enzymes were measured pre-induction and at 12 and 24 hours post cross clamp release. Quality of analgesia was assessed using VAS together with side-effects for three days postoperatively.

Kaplan-Meier cumulative survival plot for time to extubation show a significant reduction in extubation time in the epidural group compared with control group with over 60% of epidural patients extubated in the first hour following surgery ($P<0.01$). There were no significant differences in Troponin I, CK, CKMB and CKMB% levels. VAS pain scores were significantly reduced at all times measured in the epidural group.

The use of epidural anaesthesia for coronary artery bypass surgery results in a significant reduction in time to extubation and improved pain relief compared with conventional opioid based techniques with no increase in Troponin I levels. This may significantly reduce demand on ICU resources.

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## THE RELATIONSHIP BETWEEN PLATELETWORKS™ AND LABORATORY ASSESSMENT OF ASPIRIN-RELATED PLATELET DYSFUNCTION IN CARDIAC SURGICAL PATIENTS

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*Purpose of study:* The Plateletworks™ (Helena Laboratories, Beaumont, TX, U.S.A.) is a new device for assessment of platelet aggregation at the point of care. The aim of the current study was to assess the ability of PlateletworksTM to detect aspirin-related platelet dysfunction in cardiac surgical patients, and compare it to standard laboratory assessment.

*Methods:* Blood samples were obtained from 30 elective cardiac surgical patients after the induction of anaesthesia. Patients were divided into two groups on the basis of their last ingestion of aspirin. Group 1 had received aspirin within 48h of surgery. Group 2 had not received aspirin for at least 72h before surgery. Patients who had received clopidogrel, abciximab or tirofiban in the week prior to surgery were excluded. Plateletworks™ platelet aggregation using collagen stimulation (10 g/ml) was performed using whole blood within 4min at the point of care. Laboratory assessment of platelet aggregation using platelet rich plasma and the same final concentration of collagen was performed within 60 min using a standard spectrophotometric technique. For both techniques, platelet aggregation less than 40% of maximum was considered 'abnormal'. The sensitivity and specificity of each technique for the differentiation between Group 1 and Group 2 patients was determined.

*Results:* Seven patients had received aspirin within 48h (Group 1, mean age 67y, range 52-74y). The remaining patients had not received aspirin for at least 72h (Group 2, mean age 71y, range 37-80y). The sensitivity of the Plateletworks™ for the identification of Group 1 patients was 85% with a specificity of 52%. By comparison the sensitivity of the laboratory assessment was 57% with a specificity of 100%.

*Conclusion:* The results suggest that the Plateletworks™ is more sensitive than laboratory assessment of aspirin-related platelet dysfunction in cardiac surgical patients. However, the low specificity indicates that the Plateletworks™ is of limited use for the detection of aspirin-related dysfunction in this group of patients. Further assessment of the Plateletworks™ device in cardiac surgical patients is required.

## PERIOPERATIVE SERUM BETA 2 MICROGLOBULIN CONCENTRATIONS IN OBSTRUCTIVE JAUNDICE

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*Purpose of study:* Beta 2 microglobulin is a low molecular weight protein, 95% filtered by the normal glomeruli and reabsorbed almost completely by proximal tubules. It is influenced by the glomerular filtration rate (GFR) and correlates with it[1]. Elevated levels of serum B2M (SB2M) were found in patients with hepatic impairment due to hepatitis and alcohol-induced cirrhosis[2]. Obstructive jaundice can lead to hepatic and renal impairment.