Conclusion: No mortality was associated with surgical fixation of fractured ribs. The LOS and the duration of postoperative NIV were satisfactory. As our experience grows we will be reporting more comprehensive and longer-term outcomes.

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Peripheral Vascular Complications Are Associated with Increased Mortality in Patients on Femoral Venous Arterial ECMO

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147 patients from January 2008 to August 2015 underwent VA ECMO therapy at a single institution. The mean age of the patients was 49 ± 14 years (16 to 85 years) and 64% (n = 94) were male. The primary indications for VA-ECMO were primary graft failure post heart transplant (29%), cardiac arrest (22%) and post cardiomyopathy (19%). Despite 93% of patient having a backflow cannula, 25% still developed distal limb ischaemia leading to compartment syndrome in 10% and amputation in 4%. Age, diabetes and dialysis were strong predictors of distal limb ischaemia. Patients with pre-existing peripheral vascular disease were significantly at risk of compartment syndrome (p = 0.011) and amputation (p = 0.007). 30-day mortality was 50% in patients with compartment syndrome. Peripheral cannulation for VA ECMO can lead to ischaemic complications in significant numbers of patients in cardiogenic shock. Once these complications develop, patient outcomes are grim. Patients requiring femoral ECMO must be carefully assessed for vascular complications post insertion. Early intervention is vital with consideration given for alternate sites of cannulation.

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Current Results for ECMO Post Cardiac Surgery – Minimising Morbidity, Improving Outcomes

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Introduction: Cardiac surgical patients in cardiogenic shock may require extra corporeal membrane oxygenation (ECMO) support. This is “traditionally” associated with poor survival and increased morbidity. This study reviews the short-term outcomes for ECMO usage in this challenging group.

Methodology: 41 patients received postoperative VA-ECMO from January 2008 to August 2015 at St Vincent’s Hospital. Only patients undergoing conventional cardiac surgery were analysed. Cardiac transplantation and ventricular assist device surgery was excluded. Mean age was 55.4 ± 15.1 years, 78% were male. The operations included coronary artery bypass grafting, valvular surgeries, aortic dissection repair, left ventricular aneurysm repair, aortic root surgeries and cardiac myomectomy. For 6 patients VA-ECMO was initiated preoperatively. 28 patients received intraoperative ECMO and 7 patients had to undergo ECMO in the early postoperative period. ECMO was placed peripherally (femoral) in 35 patients and centrally in 6 patients.

Results: 28 (68.3%) patients were successfully weaned off ECMO and 20 (48.8%) patients survived to hospital discharge. The average duration of support was 6.3 ± 4.3 days and the average length of postoperative stay was 30.5 ± 28.0 days. 51.2% of the patients had postoperative renal failure requiring haemodialysis, 41.5% underwent rethoracotomy for bleeding and 14.6% had lower limb ischaemia. Factors associated with increased mortality included longer ICU and hospital stay, and poorer LV function.

Conclusion: Early institution of ECMO can minimise postoperative morbidity and improve outcomes. In this study patients were highly selected, however results suggest that ECMO can be used to assist recovery from complex surgery in high risk patients with good outcomes.

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Melioidosis: A Diagnostic Dilemma

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Purpose: Melioidosis is a disease caused by the gram negative bacteria Burkholderia pseudomallei, which is distributed in soil and surface water in tropical regions of Southeast Asia and Northern Australia. Findings in chronic melioidosis include cavitating, nodular or streaky infiltrates mimicking tuberculosis. The clinical features (chronic night sweats, weight loss, fatigue) and radiological findings in melioidosis (mediastinal lymphadenopathy) may mimic underlying malignancy. The gold standard for diagnosis of melioidosis is microscopy and culture. The role of cardiothoracic surgery is to provide tissue diagnosis through mediastinal biopsy; to rule out malignancy, and to therapeutically drain abscesses.

Methodology: A retrospective study was performed at the Townsville Hospital of patients treated within the last 5 years who underwent drainage of abscess and/or mediastinal biopsy and subsequent diagnosis of melioidosis by culture.

Results: Five patients were diagnosed with melioidosis following thoracic surgery and mediastinal biopsy. Four of these patients were to rule out malignancy and the fifth to rule out tuberculosis. All five patients had diabetes. Four out of five were male and three out of 5 patients were Indigenous. Three patients had thoracotomies, one had VATS and one mediastinoscopy. All five patients have subsequently undergone full treatment for melioidosis with 3 to 6 months of cefazidime, meropenum or bactrim.

Conclusion: Melioidosis often presents with lymphadenopathy, and may mimic both tuberculosis and malignancy. Mortality in the setting of systemic disease is very high. Prompt diagnosis via surgical biopsy and treatment through drainage of abscess is crucial for successful management.

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