



ABSTRACT BOOKLET

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EXTREME PRECONDITIONING: COLD WATER SWIMMING TO IMPROVE SURGICAL OUTCOMES

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Swimming outdoors in cold water has a wide range of physiological and psychological effects. The chronic changes resulting from cold-stress adaptation and the acute effects of parasympathetic stimulation along with the associated benefits of blue therapy, green therapy, community and exercise may be employed to attenuate the stress response to surgery. As a consequence, this intervention may reduce postoperative complications and improve recovery and wellbeing of both staff and patients.

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RENAL ACCESS SURGERY: GA, RA OR LA

Dr David Hewson

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Six thousand people start haemodialysis annually in the UK and at any one time over 20,000 people are maintained on haemodialysis regimes at an annual cost of £35,000 per patient. Reliable vascular access is one of the main modifiable interventions to improve patient outcome and experience of haemodialysis. Up to 50% of arteriovenous fistulae fail within 12 months of formation due to inadequate wall thickening and remodelling. Interventions to improve the long term patency of AV fistula would be welcome to improve patient outcome and healthcare costs. Fistula surgery can be performed under local anaesthesia, brachial plexus blockade or general anaesthesia, with widespread variation in practice between surgical teams and renal centres. Mechanistic and observational evidence supports the promotion of perioperative blood flow arising from brachial plexus block induced sympathectomy as offering a means to sustain fistula patency both in the short and long term. Small randomised controlled trials are supportive and large-scale multicentre prospective evidence is being gathered to help answer the question of whether regional anaesthesia offers long term benefit for patients undergoing fistula surgery. This talk will provide an overview of renal access surgery and current states of evidence, together with descriptions of how fistula surgery under brachial plexus blockade can be performed.



HISTORY OF AORTIC ANEURYSM REPAIR

S Waquar Yusuf

Consultant Vascular & Endovascular Surgeon

Honorary Clinical Professor

University Hospitals Sussex & Brighton and Sussex Medical School

The history of aortic interventions is relatively short and despite many advances over the past seven decades, the principles have remained more or less unchanged.

The attempts made to repair aortic aneurysms at the turn of last century were endovascular. Open repair was first performed in Paris in 1951 using a homograft. The development of Dacron graft and technique of inlay open repair that made the technique more widely available over the following four decades remained largely unchanged. The development of modern endovascular approach has led this approach to become the dominant technique and in this respect the aneurysm repair has gone full circle.

The details of these techniques, role of pioneers, challenges faced and development of an evidence-based approach will be presented with some personal observations over the past quarter century.



WHEN SHOULD (& WHEN SHOULDN'T) WE REPAIR ABDOMINAL AORTIC ANEURYSMS?

Miss Rachel Bell MS FRCS
Consultant Vascular Surgeon & President of the
Vascular Society of Great Britain & Ireland
Freeman Hospital, Newcastle upon Tyne

Summary

A pragmatic talk about the decision- making about picking winners for aortic surgery – it will cover the philosophical, ethical and medical evidence for the organisational processes we currently use in our multi-disciplinary teams to support shared decision making for patients with abdominal aortic aneurysms. It will showcase the latest data from the National Vascular Registry and discuss future improvements for the care of this patient group.



ANAESTHESIA FOR HIGH CLAMP AORTIC SURGERY

Dan Taylor
Consultant Anaesthetist
Guy's and St Thomas' Hospital

This talk will describe the pathophysiology of high aortic cross clamping in vascular surgery and the various methods of ameliorating these effects and protecting against end organ damage. I will give a practical approach based on my experience of managing this scenario and hope to learn something from the audience!



ERAS GUIDANCE: PERIPHERAL ARTERIAL SURGERY

ERAS Guidance: Peripheral Arterial Surgery

Katharine L. McGinagle, MD MPH

Associate Professor of Surgery, University of North Carolina at Chapel Hill

Enhanced Recovery After Surgery (ERAS®) pathways have been beneficial for many surgical specialties, and have recently been developed for vascular surgery.^{1,2} Patients undergoing vascular surgery, particularly those with peripheral artery disease (PAD), pose distinct challenges compared to the general population owing to their advanced age, frailty, and the presence of multiple co-existing medical conditions. These factors give rise to complex treatment approaches and high utilization of healthcare resources, including extended hospital stays and greater rehabilitation requirements. ERAS®, which is designed to provide high-quality perioperative care and expedite recovery, is well suited to help patients undergoing infrainguinal bypass.

The Society for Vascular Surgery and the ERAS® Society collaborated and formed a multidisciplinary, international guideline development group comprising vascular surgeons, anesthesiologists, and advanced practice providers. A separate team of investigators and reference librarians conducted a search for literature including mention of surgery for PAD and at least one of the ERAS elements (3460 citations, of which 45 involved patients undergoing lower extremity bypass surgery). Since many ERAS items had not been studied specifically in patients undergoing infrainguinal bypass, other published data and ERAS guidelines from other surgical specialties were included for the elements that were generalizable. Twenty-six suggestions for best peri-operative practices were made based on the supporting literature.

The consensus statement is divided into pre-admission, pre-operative, intra-operative, and post-operative sections. The consensus statement defines current standards based on the available medical evidence, but there are many gaps in the literature. The lines of research to be developed could include any of the ERAS elements, but are particularly needed in pre-admission optimization, prehabilitation, pre-anesthetic sedatives and analgesia, and mobility protocols. Taken as a whole, there is great opportunity to improve the safety and outcomes for patients undergoing lower extremity bypass surgery, especially when viewed through an ERAS lens. Using the ERAS philosophy of forming multi-disciplinary care teams that focus on patient optimization and shared decision making, physiologic stress minimization, and reduction in post-operative healthcare variation, we can enhance our current standard of care.



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PERIOPERATIVE CARE IN OPEN AORTIC SURGERY – ERAS

Katie Ayyash

Consultant Anaesthetist and Perioperative Medicine Clinical Lead, Honorary Lecturer Hull and York Medical School, York and Scarborough Teaching Hospitals NHS Foundation Trust

Major surgery maybe associated with undesirable sequelae such as pain, cardiopulmonary complications, gastrointestinal complications and prolonged recovery [1]. This is thought to be due to the surgical stress response resulting in increased demands on organ function which contributes to post-operative morbidity. A multimodal approach to recovery starting in the pre-operative period with a focus on early rehabilitation, nutrition, pain relief and restricting use of recovery limiting procedures such as IV fluids, urinary catheters, drains etc, has been shown to improve post-operative functional status with early hospital discharge [1]. This approach is known as Enhanced Recovery After Surgery (ERAS) and has been the standard of practice in the UK for over 10 years. This practice has already been successfully implemented across a range of surgical specialities, and there is no reason why it cannot be implemented into the vascular surgery population.

In 2022, evidence based guidelines were published by the Society for Vascular Surgery relating to the different elements in the perioperative period for patients undergoing open aortic surgery [2]. Many patients presenting for vascular surgery are elderly, with: multiple co-morbidities, geriatric syndromes such as frailty and sarcopenia; and often have poor physiological reserve. They have limitations in physical functioning due to impairments in walking from chronic illness, pain, cramps and fatigue, and are at risk of malnutrition due to the use of medications that interfere with nutrient absorption and metabolism [3,4]. Many of these factors can be screened for and addressed in the pre-operative period to potentially reduce post-operative morbidity and aid a quicker recovery.



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PERIOPERATIVE CARE IN OPEN AORTIC SURGERY – ERAS

Intra-operatively, a standardised multi-modal anaesthetic protocol should be considered with the aim of minimising the effects of anaesthesia and surgery to help facilitate an enhanced recovery. Invasive arterial and central venous monitoring together with non-invasive cardiac output monitoring have a role in helping to avoid swings in haemodynamics secondary to the effects of cross-clamping and un-clamping, and guide intra-operative fluid therapy [5,6]. It is ideal to maintain a blood pressure close to baseline during cross-clamping to maximise collateral flow to distal tissues. Hypotension is harmful and there is evidence to suggest that even short periods of a low mean arterial pressure (MAP) less than 55mmHg have been associated with significant increased risk of acute kidney injury (AKI) and myocardial injury. This risk is increased with the amount of time spent below this threshold, and there does not appear to be any safe duration of time spent with a MAP below 55mmHg [7]. A large retrospective cohort study reported that any decrease in MAP <65mmHg should be avoided as values below this cut-off are strongly associated with an increased rate of AKI and myocardial injury, even if exposures were brief at a MAP of 65 or lower [8].

Studies of intra-operative fluid administration and vasopressor use have demonstrated that decreased fluid administration and increased vasopressor use were associated with an increased risk of AKI [9,10]. It is important not to treat hypotension blindly as even a mild AKI is associated with long-term kidney impairment [10]. Owing to the detrimental effects of intra-operative hypotension, simple measures such as controlling intra-operative MAP and ensuring adequate fluid therapy should be strongly considered.

There are various post-operative considerations that can help patients to make a quicker recovery and have a shorter length of hospital stay. These include: early feeding and maintenance of hydration which have been shown to decrease the incidence of ileus and negates the need for continued post-operative intravenous fluid administration [11]; use of multimodal analgesia to ensure optimal post-operative pain relief helping to aid early mobilisation [12]; and removal of indwelling catheters and drains as early as possible [13].

Implementation of an ERAS protocol in the vascular surgery population group will likely benefit both the patient and healthcare service and significantly reduce post-operative morbidity, length of hospital stay and costs; and improving patient satisfaction, as has been demonstrated through other ERAS protocols in other surgical specialties.



PERIOPERATIVE CARE IN OPEN AORTIC SURGERY – ERAS

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POSTER PRESENTATIONS

ABSTRACT NO	TITLE	PRESENTING AUTHOR
1	FAILING TO ACT: CHALLENGES OF ACT MONITORING IMPLEMENTATION IN THE SOUTH MERSEY ARTERIAL CENTRE	NICKI RUSSELL
2	TOE THE LINE: REDUCING RELIANCE ON GENERAL ANAESTHESIA FOR MINOR LOWER EXTREMITY AMPUTATION	ANTONIA BENTON
3	FRAILITY IN MAJOR LOWER LIMB AMPUTATION - A SINGLE-CENTRE AUDIT OF FRAILITY PREVALENCE, ASSESSMENT AND MANAGEMENT IN A COHORT OF PATIENTS WHO UNDERWENT MAJOR LOWER LIMB AMPUTATION IN A YEAR.	CHUYAN YU
4	CARDIOPULMONARY EXERCISE TESTING DOES NOT DIFFERENTIATE DECISION TO OPERATE IN PATIENTS ASSESSED FOR DISTAL OCCLUSIVE AORTIC DISEASE.	IAN YOUNG
5	APPLYING MACHINE LEARNING TO CARDIOPULMONARY TESTING VARIABLES FOR THE PREDICTION OF SURGICAL INTERVENTION.	IAN YOUNG
6	PREVALENCE OF SMOKING AND IMPACT ON PERIOPERATIVE OUTCOMES AFTER ELECTIVE ABDOMINAL AORTIC ANEURYSM REPAIR IN THE UNITED KINGDOM: AN ANALYSIS OF THE NATIONAL VASCULAR REGISTRY	KITTY WONG
7	SHARING THE DIFFICULT DECISION TO OPERATE ON ABDOMINAL AORTIC ANEURYSMS (AAA) OR NOT? INFRA RENAL ANEURYSM TURN DOWN RATES IN LANARKSHIRE - HOW DO WE INFORM OUR PATIENTS AND PRACTICE?	FAITH DALGATY
9	MANAGEMENT OF RUPTURED ABDOMINAL AORTIC ANEURYSM: A CHECKLIST AND POSTER TO AID ANAESTHETISTS	ANGUS HAMILTON
10	COMPARISON OF METHODS OF ESTIMATING BLOOD LOSS DURING MAJOR VASCULAR SURGERY	PHILIP DAVENDRA

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POSTER PRESENTATIONS

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12	THE CROSSMATCH CONUNDRUM: AN EXPLORATION OF PERIOPERATIVE BLOOD TRANSFUSION PRACTICE IN ELECTIVE OPEN ABDOMINAL AORTIC ANEURYSM REPAIR	KRISTYN DYER
13	CONTINUOUS POPLITEAL SCIATIC NERVE BLOCKADE IN PATIENTS WITH CHRONIC LIMB ISCHAEMIA; AN ASSESSMENT OF BENEFIT ON PAIN SCORES, FUNCTIONAL ABILITY, AND MENTAL STATE.	THOMAS SHARP
14	CCAROTID ENDARTERECTOMY (CEA) PERI-OPERATIVE BLOOD PRESSURE AUDIT	N CHARLESWORTH
15	HYPERKALAEMIA HAZARDS IN RAPID TRANSFUSION - TIME-RELATED INCREASE IN PACKED RED CELL POTASSIUM LOAD	QUANG NGUYEN
16	THORACIC EPIDURAL ANAESTHESIA FOR OPEN ABDOMINAL VASCULAR SURGERY: IS IT STILL THE GOLD STANDARD OR HAVE TIMES CHANGED?	DANIELLE BRIGGS
17	A SERVICE EVALUATION PROJECT ASSESSING PERIOPERATIVE GLYCAEMIC VARIABILITY IN PATIENTS WITH DIABETES MELLITUS UNDERGOING VASCULAR SURGERY.	ALICE ISMAIL
18	MODIFIABLE PATIENT FACTORS AFFECTING LENGTH OF HOSPITAL STAY IN PATIENTS UNDERGOING LOWER LIMB RE-VASULARISATION SURGERY IN A DISTRICT GENERAL HOSPITAL	NAVREEN CHIMA
19	THE IMPACT OF ANAESTHESIA TECHNIQUE ON OUTCOMES FOLLOWING LOWER LIMB AMPUTATIONS IN PERIPHERAL VASCULAR DISEASE PATIENTS	ALEX JOO HEE KIM
20	CTHE A-HEAD STUDY: A RETROSPECTIVE REVIEW OF THE EFFECTS OF SOCIO-ECONOMIC DEPRIVATION ON MODIFIABLE PREOPERATIVE HEALTH BEHAVIOURS AND OUTCOMES AFTER AORTIC ANEURYSMS REPAIR.	SARAH SILITO

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VERBAL PRESENTATIONS

ABSTRACT NO	TITLE	PRESENTING AUTHOR
1	APREOPERATIVE THROMBIN GENERATION IS CORRELATED TO INTRAOPERATIVE BLOOD LOSS IN OPEN AORTIC SURGERY.	NEILL AITKEN
2	TOBSERVATIONAL ANALYSIS OF THE AFFECT OF NATIONAL LOCKDOWN ON THE CARDIOPULMONARY FITNESS OF PATIENTS BEING ASSESSED FOR AORTIC SURGERY	IAN YOUNG
3	A NATIONAL STUDY OF PERIOPERATIVE SMOKING CESSATION IN VASCULAR SURGERY	SUZANNE HARROGATE
4	THE DEVELOPMENT OF A VASCULAR POST ANAESTHESIA CARE UNIT (PACU) IN THE ROYAL VICTORIA HOSPITAL, BELFAST - OUR EXPERIENCES AND OUTCOMES TO DATE.	COLIN MUNN

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