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ULTRASOUND GUIDED REGIONAL ANAESTHESIA - BEYOND INTRODUCTORY

These courses are organised by Regional Anaesthesia UK (RA-UK) in conjunction with SonoSite Ltd for training in ultrasound guided regional anaesthetic techniques. Previous experience in regional anaesthesia is essential. An autumnal 10 Category 1 CPO credits from the RCGA and Counts towards the EBDA.

Course Dates: 29-30 November 2013
10-11 January 2014

Venue: PLA M SonoSite Education Centre, 240 The Village, Rutland, Great Malvern, Worcestershire WR10 7BL

For the full listing of sonosite education and education courses, call or email to register:
www.sonoeducation.co.uk

Editorial

The people

I started anaesthesia training on 20 October 1980 at RAF Wegberg in Germany and have still new learning skills every day, usually from my younger colleagues. Throughout my career I have enjoyed being an anaesthetist enormously, in particular “the people” - those who make up the specialty around Great Britain and Ireland, and also worldwide. Anaesthesia techniques, drugs and equipment have all steadily improved to make our job easier, surgical techniques have changed (I am amazed at laparoscopic anterior resections and robotics), and of course our patients who grow older every year, and in many cases larger!

Without doubt though, the thing that has made my job fun and sustainable over the years, in UK and abroad, has been the people I work with on a daily basis. Consultant colleagues, trainees, nurses, ODPs, porters – everyone who contributes to making the NHS and the specialty what it is.

Anaesthetists make a tremendous difference to patient care, whether in the theatre, A&E, running high level meetings, or showing the compassion our new F1 demonstrated the other day when our 97 year old lady admitted on her birthday for bowel surgery was cancelled due to a lack of an ICU bed, offered to go and break the news, but stopped on the way to buy her a Birthday bun – nice one Hannah!

This edition of Anaesthesia News was put together as I finished 11 years on Council at the AAGBI, countless train journeys and many fascinating encounters with committed professionals in all walks of life. Day to day, I have realised how much I have always drawn (and been reliant) on the energy, inspiration and laughter from colleagues. Throughout my career I have enjoyed being an anaesthetist - those who make up the specialty around Great Britain and Ireland, and also worldwide.

I am always surprised at the energy some colleagues put into humanitarian projects - this month we publish a few of their stories - Mayte de Llobet visiting 6 months in Uganda working to improve anaesthesia in an impoverished setting, Michelle White resigning her consultant job to work on Mercy ships, Roger Eltringham patiently working to develop a suitable anaesthesia machine for remote consultant job to work on Mercy ships, Roger Eltringham patiently working to develop a suitable anaesthesia machine for remote

without investing in many similar ventures over the years. Madhu is probably an AAGBI record holder – he has attended the last 27 Winter Scientific Meetings, Isabeau Walker working with Madhu Patel from the Kenyan AAGBI Website & Publications Officer

Jonathan Eagleson, Alexander Bonnyman, Mark Lawley, Sean Tighe, Iain Wilson and Tom Woodcock

9 for more details.

newspaper, you can join Lifebox as a Friend for £10/month – see page 110. Lifebox in Nakuru: A headline day for anaesthesia safety in Kenya

Cardiac arrest in the prone position: What would you do?

The Swiss Cheese Model

Become a Friend of Lifebox Foundation!

A History of the Glostavent

Overland from Australia in 1963

Not the History Page:

Editorial

The Great Anaesthesia Bake

How to avoid adverse outcomes - making it personal: My 10 commandments

Anaesthesia Digested

Particles

@AAGBI Recap
Medical students in the UK and Ireland are eligible to apply to the Association of Anaesthetists of Great Britain and Ireland for funding towards a medical student elective period.

Preference will be given to those applicants who can show the relevance of their intended elective to anaesthesia, intensive care or pain relief.

For further information and an application form please visit our website: www.aagbi.org/undergraduate-awards or telephone 020 7631 8807

Closing date: 06 January 2014

The Wylie Medal will be awarded to the most meritorious essay on this year’s topic related to anaesthesia. Something old, something new, something borrowed, something blue was written by an undergraduate medical student at a university in Great Britain or Ireland.

Prizes of £500, £250 and £150 will be awarded to the best three submissions. The overall winner will receive the Wylie Medal in memory of the late Dr W Derek Wylie, President of the Association 1980-82.

For further information and an application form please visit our website: www.aagbi.org/undergraduate-awards or email secretariat@aagbi.org or telephone 020 7631 8807

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The Wylie Medal

Undergraduate Prize 2014

Medical education faces a challenging time with financial restrictions, yet an expectation of producing innovative and future-proof developments. As such, we have developed a novel learning tool designed to educate healthcare trainees in understanding the fundamentals involved with lumbar puncture, in particular spinal anaesthesia.

Spinal anaesthesia is a conceptually simple method used most commonly in abdominal, pelvic and lower limb surgery. However, it is not without its complications and risks, the majority of which can be minimised by a thorough knowledge of anatomy and tissue planes, and thorough familiarisation of the technique. It is inappropriate to learn skills on patients until the relevant theory and practical aspects of any technique is mastered and in previous times, when the NHS was well funded, training aids were plentiful, despite the cost.

With an appetite to develop appropriate technology for instructors and trainees alike, following extensive research into different materials, a unique learning aid has been developed. The model is different from the conventional “Swiss cheese model”, although relies on some similar ingredients. This new model has the advantage of clear definitions of the different tissue planes encountered during lumbar puncture and even provides appropriate tactile sensations of relevant anatomy. This 3-dimensional model can also be used (if secured adequately using anatomical fixation sticks (cocktail) and correctly configured by instructors) to be a model for practicing and familiarising oneself with the dextrous skills involved in delivering a safe spinal anaesthetic.

The model has the strong benefit of being able to be freshly prepared and inexpensive. Recognising that learning is associated with hunger, we believe we have transformed the era of “see one, do one, teach one” into the arrival of the “see one, do one, teach one and eat one” learning aid.

Dr Samantha Lyen, CT1 Anaesthesia, Royal Devon & Exeter
Dr Lawrence Kidd, CT1 ACCS, Royal Devon & Exeter

Reference


The Swiss Cheese Model of Spinal Anaesthesia

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Not the History Page:  
Overland from Australia in 1963

Structured medical training did not exist when I finished my house jobs in 1959. Uncertain what to do, I saw an advertisement in the BMJ for a resident medical officer in Hobart, Tasmania. This looked a more attractive job than two years in the army. Six weeks later I was one of 12 new RMO's at the Royal Hobart Hospital. The year as an RMO included four weeks of anaesthesia, after which time you were considered perfectly capable of giving an anaesthetic anywhere!

Another motive in coming to Australia had been the idea of returning to the UK overland. This had first been done in 1955 by the Oxford and Cambridge overland expedition, going through Burma and finishing at Singapore. In preparation for this, I and my wife Margaret bought a short wheel base series II Land Rover and had a trial run in Asia, for medical advice could be traded with officials instead of bribes.

My anaesthetic experience came in useful when we were having lunch with the superintendent of a small hospital in northern Queensland. The Mayor's eight year old son was admitted with a fractured forearm. With an ethyl chloride induction, then ether on a mask, the fracture was reduced and we resumed our lunch. To-day my job was completed and we left Hobart for the first stage, 2200 miles up the east coast to Cairns in northern Queensland.

Preparing for such a journey was like preparing for a difficult anaesthetic. Problems had to be anticipated and equipment available. So, extra fuel tanks to give a 600 mile range, water tanks for the desert, two spare wheels, a winch etc were fitted. As with an anaesthetic, a good record is essential so a typewriter was fixed to for the desert.

An interesting example of the failure to check the functioning of newly installed equipment before it is required in an emergency (cf anaesthesia) occurred in a very remote canyon in the MacDonnell Range, 200 miles west of Alice Springs. We had found an idyllic camp site, flat, trees for shade and a pool for swimming. It was so idyllic we stayed for two days but on leaving, the engine wouldn't start. The battery was completely flat, it had been used to power the lights for cooking and for reading in bed under our mosquito nets. A flat battery isn't a problem, the engine can be crank started but not this time. The new winch fitted on the front had a clutch mechanism connecting to the engine that had been installed incorrectly, so that it didn't engage and allow the starting handle to be used to turn the engine. So we were stuck.

Every outback traveller knows that if your vehicle breaks down the rule is you stay with it, underneath if necessary for shade and help will eventually come. But the desire in a crisis always seems to be to DO SOMETHING (cf anaesthesia.)

For the long journey to Perth (via Alice Springs) we needed a three month's supply of medical equipment, supplies, and a resident medical officer. I and my wife Margaret were the new RMO's at the Royal Hobart Hospital. I was posted to the northern end of Australia. As with an anaesthetic, a good record is essential so a typewriter was fixed to for the desert. Sleeping became a pleasure!

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No seat belts then, so we bounced up to hit the roof. Coming down, Eric’s thigh bent the ignition key to 90°. He still has the scar. A few more degrees and it would have broken off, leaving a stub in the lock and the need to ‘hot wire’ the engine.

From Perth we sailed to Singapore, then drove through Malaya to Bangkok, where we hoped to persuade the Burmese Embassy to give us permission to drive through Burma to India. They were adamant, the border was closed, so we retraced our route to Penang. A critical incident occurred on the way. We stopped in the jungle to see some elephants, parking the Land Rover on a slope. Land Rover hand brakes are notoriously poor and as it wasn’t in gear it started rolling backwards towards a deep ravine. A mad dash to stop it was successful, otherwise it would have been an ignominious end to the expedition.

At Penang we found a cargo boat to take us to Calcutta. Here it finally dawned on us that Margaret’s repeated vomiting was not due to the local food but early pregnancy! She reluctantly flew back to the UK, leaving Eric and me to continue across India. From now on we would have to do our own cooking and washing! A diversion up the new road to Kathmandu was disappointing but anther diversion to Srinagar in Kashmir was much more interesting. Here we climbed the highest mountain in Kashmir, Kolahoi at 17,779 ft. We were a bit casual, treating it like a Lake District mountain. Consequently we had to spend a very cold night standing on a ledge, just below the summit. Had the weather changed I would not be writing this article!

The next country was Pakistan and another diversion to get out of the narrow track there was another critical incident. A moment’s inattention watching elephants, parking the Land Rover on a slope. Land Rover hand brakes are notoriously poor and as it wasn’t in gear it started rolling backwards towards a deep ravine. A mad dash to stop it was successful, otherwise it would have been an ignominious end to the expedition.

The next stage was to cross into Turkey, where the landscape changed from brown to green. Past Mount Ararat down to the Black Sea at Trebizond, just where Xenophon in 403 BC had led his army of 10,000 men. The ferry across to Istanbul (no bridge then) brought us back to Europe and we could reflect on how we had survived for the past eight months. Australia was easy, camping out and cooking on wood fires. Asia was more difficult due to the density of people but they were extremely hospitable for we were something of a novelty. Friends, contacts and rest houses also provided accommodation and street vendors, cafes and station restaurants provided food. But we did lose weight.

Visas also need evidence of up to date immunisations. Eric’s cholera shots were not up to date and the battery was now flat. This was a regular mission in every capital. Embassies have the power to send you home without a passport, so we had to be careful. Visas also need evidence of up to date immunisations. Eric’s cholera shots were not up to date and the battery was now flat. This was a regular mission in every capital. Embassies have the power to send you home without a passport, so we had to be careful. Embassies have the power to send you home without a passport, so we had to be careful.

From T ehran the route lay north to the Caspian Sea but on the way we had to stop and climb the highest mountain in the Middle East, Demavend at 18,376 ft. An easy climb compared to Kolahoi, except for the sulphur fumes at the summit, as it is an active volcano. The Caspian was bliss, camping on a deserted beach. Here I gave the Land Rover its last 3000 miles service. Land Rovers are very simple machines (cf a Boeing Machine) easy to maintain and easy to fix. The only problems we had all the way were a few punctures. Mending these is a bit tricky – no ‘Kwick-Fits’ in the desert. Easy if you know how, very difficult if you don’t (cf anaesthesia). The solution is to get the tyre off the wheel rim – no ‘Kwick-Fits’ in the desert. Easy if you know how, very difficult if you don’t (cf anaesthesia). The solution is to get the tyre off the wheel rim.

The next 2200 miles to the Channel crossed seven countries, the communist ones being particularly bureaucratic. The battery was now getting so weak the engine could only be started by cranking it over and just importantly visit embassies for visas for the countries ahead. This was a regular mission in every capital. Embassies have short opening hours and shut frequently for holidays, so it could take several days to get the paperwork to be done as passports had to be left. Visas also need evidence of up to date immunisations. Eric’s cholera shots were not up to date and the battery was now flat. This was a regular mission in every capital. Embassies have the power to send you home without a passport, so we had to be careful. Visas also need evidence of up to date immunisations. Eric’s cholera shots were not up to date and the battery was now flat. This was a regular mission in every capital. Embassies have the power to send you home without a passport, so we had to be careful.

The last 700 miles to the rendezvous with our group of eight Australians. They had been stuck for 24 hours. It was a very cold night standing on a ledge, just below the summit. Had the weather changed I would not be writing this article!

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Mrs W was a 59-year-old lady with a history of asthma, gastro-oesophageal reflux disease and anxiety. Unfortunately, a recent endoscopy biopsy of a breast lump had proved cancerous and required a wider local excision and axillary lymph node sampling.

Her first operation had been complicated by a flare-up of her asthma postoperatively, which required her to stay in hospital a day longer than expected. The surgeon, Mr C, met Mrs W in the clinic a week before the second operation to discuss the procedure in detail, including the risks and benefits. Mrs W was given a copy of that letter as well as a patient information leaflet.

Dr S was the anaesthetist assigned to Mrs W’s case. He saw Mrs W on the ward and they discussed the anaesthetic in detail. He noted the difficulties that Mrs W had after her previous surgery, but was reassured that she was under good control and that her chest was clear. Mrs W was very anxious about the diagnosis and operation, but discussed with the hospital manager. However, from a medicolegal perspective, lack of a signed consent form alone would not be sufficient to bring a claim for clinical negligence.

At the scheduled time of Mrs W’s operation, Mr C was slightly delayed as he was required to attend another patient on the ward. He rang the operating theatre to let them know he was on the way. This message was relayed to Dr S who interpreted this as a cue to send for the patient.

As there was a shortage of PORTing staff, the ODA decided to collect the patient himself. He immediately noticed that the patient was extremely anxious and hurried through the check list. The patient said she had signed a consent form but this was not checked.

On arrival in the anaesthetic room, the ODA confirmed that all the paperwork was in order and so Dr S continued Mrs W and commenced anaesthesia. Intubation was complicated by moderate bronchospasm, which required treatment with intravenous salbutamol. Just as they were expected the patient was extubated the patient successfully at the end of the procedure. He

An opportunity arose and through the AAGBI, I volunteered in a UK-based healthcare partnership project called the “Ugandan Maternal and Newborn Hub” (UMNH). I spent six months (Aug 2012- Feb 2013) working at the Mbarara Regional Referral Hospital (MRRH). During this time, I was heavily involved in leading changes to help improve patient safety and quality of care.

For the enthusiastic volunteer, the motivations behind working in a third world country are varied. There is certainly a fundamental element of wanting to help the underprivileged and those in need. Many are curious with a sense of adventure; they want to try something new, something completely different. Others see it as a challenge, both from a personal and a clinical perspective. Some might just want to take a break from the ‘conveyor belt’ training system; it is a way to change lack and gain clinical experience. For me, it was a combination of all these reasons.

It did not take me long to realize that in a place like Uganda, my initial goal of ‘saving lives and making a difference’ was actually a lot easier said than done. In order for me to stay focused on my objectives and not drown in the circumstances, I had to reassess the situation and redefine my goals within a month of arriving. In the months that followed, this became a regular, essential exercise.

Dealing with self-doubt: can I make a difference? The struggles and triumphs

I joined the anesthetic department in MRRH, which was headed by Dr Stephen Ttendo. In the first two weeks of joining, my enthusiasm and energy were overflowing and I had a list of things that I had wanted to achieve. Within a month, my enthusiasm had to be curtailed and the list of objectives had halved and by six weeks, I was left with a core set of projects. This was not because I had given up but I had quickly learnt the need to adapt to the local circumstances and a different pace of working. Resetting my goals and expectations was important because trying to over-achieve within such resource constraints was not realistic.

MRRH is a public teaching hospital and has a high-turnover rate of medical volunteers. The pool of volunteers includes medical students on elective programs, medical professionals on short-term surgical camps, long-term healthcare partnership programs and global health projects. One major issue with having such a high-turnover rate of volunteers is that ideas and projects always get started but rarely continue after the volunteers leave.

Uganda is one of the poorest nations in the world and the health sector is severely underfunded. A patient safety culture is not well established and there is little accountability for clinical mistakes or negligence. Although services in the public healthcare sector are supposedly free, basic resources (drugs, fluids and even oxygen) often run out and patients have to purchase them themselves from medical supply stores. Many patients cannot afford this. It is also hard to imagine how adversely poverty can affect a person’s way of life and more shockingly, their attitude towards work. Most of the staff have to take on multiple jobs outside of the hospital in order to supplement their government salaries. In addition, it is not uncommon for salaries to be delayed for several months in Uganda. Overworked and underpaid staff with low morale result in a working environment that was certainly more trying than I had anticipated...

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Dealing with self-doubt: can I make a difference? The struggles and triumphs
Personal reflection: possible ways of making a sustainable change

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Kenya is a beautiful country in East Africa, best known for its wonderful game reserves and spectacular annual migrations in the Masai Mara. However, scratch beneath the surface, and there is much of concern. Kenya ranks 145th on the United Nations Human Development Index, and funding for health is limited. Anaesthesia is particularly neglected, with around 145 physician anaesthetists and 300 Anaesthetic Clinical Officers serving the population of 42M. Despite these difficulties, the Kenya Society of Anaesthesiologists (KSA) is thriving. Its members are determined to improve the standard of anaesthesia care for all Kenyans, particularly those living in rural areas where anaesthesia is routinely provided without the benefit of a pulse oximeter, a situation scarcely imaginable for those of us working in more affluent surroundings.

The motto of the KSA is ‘Safe Anaesthesia’, and the KSA is a natural partner for the Lifebox Foundation, established as a new charity in 2011 to improve the safety and quality of surgery in low-resource countries through introduction of routine pulse oximetry and the WHO Surgical Safety Checklist.

The first Lifebox/KSA pulse oximetry and surgical safety checklist workshop was held at the Merica Hotel, Nakuru, Kenya on 14th August 2013. The aim of the workshop was to describe routine safety checks in surgery and the principles of pulse oximetry, and for participants to receive a Lifebox pulse oximeter at the end of the training session. Forty-two enthusiastic anaesthetic clinical officers and nurses from the Rift Valley County were identified by the Director of Medical Services, and arrived at Nakuru from their various stations. Volunteers from the KSA delivered the Lifebox training, dividing the participants into small groups, so that all could contribute to discussions. Teaching covered a diverse range of topics, such as basic physiology of oxygen transport, how to achieve a reliable saturation reading and how to look after an oximeter, and included a practical demonstration of the Lifebox oximeter. The clinical scenarios were particularly popular, as these dealt with common situations we all face in our everyday practice.

The other main driver for us at the Lifebox Foundation is the WHO Surgical Safety Checklist, developed under the leadership of Lifebox Chair Atul Gawande in his role as expert lead for the WHO Safe Surgery Saves Lives programme. During the checklist session after lunch, participants were able to share stories of common mishaps in theatre, and they agreed that routine safety checks and better team working would be of benefit to all patients, wherever you work in the world. Participants had an opportunity to role play the checklist, and to consider how the checklist could be introduced into their hospitals. There was unanimous agreement that surgeons should be encouraged to attend this type of training!

At the end of the workshop, all participants were presented with their own oximeters ‘owned by the Kenya Society of Anaesthesiologists, Lifebox and the people of the district’, for which the clinical officers were to act as the guardians. We were extremely fortunate to receive funding for the oximeters from the Kenyan company Scangroup Ltd, one of the largest marketing companies in Africa.

Our particular thanks go to: Bharat Thakar, CEO Scangroup, Helen Huma Smith, Andrew Scott, and a great team of KSA volunteers (described in the delegate feedback as ‘jovial, courteous and knowledgeable….they gave us their best’): Dr Louis Lizwa, Dr. Ednah Gisore, Dr. Wangui Thang’a, Dr. Muiruri King’ang’a, Dr. Idris Chepoke, Dr. Karen Mbaya, Dr. David Misango and Dr. Anuja Kapila. Grateful thanks also to the behind the scenes workers without whom we would not have managed - for the KSA; Phoebe Khagame and Nicole Otieno and for Lifebox; Kristine Stave, Sarah Kessler and Kui Mangayu.

Lifebox in Nakuru: A Headline Day for Anaesthesia Safety in Kenya
Cardiac arrest in the prone position: what would you do?

My consultant and I had settled our patient on the table, and I began to think. I was thinking about what I would do if this morbidly obese gentleman having an elective mediastinoscopy in the prone position had a cardiac arrest (not the usual course of my anaesthetics, but anyway...).

It would take at least 5 people to turn him supine; this would be time consuming and not ideal with an open back. Being aware of the extra risk factors for cardiac arrest in the prone position, (air embolus with an open venous plexus, or the use of hydrogen peroxide) we had tried to reduce any risk by ensuring the patient was well hydrated and correctly positioned with no venous obstruction. But some things difficult to be optimised, like the patient with Duchenne muscular dystrophy appearing on the list for correction of their scoliosis or the ARDS patient ventilated in the prone position on ICU. Before I had worked out what to do I was sent for coffee, so I decided to look it up.

It turns out that there are no guidelines on how to manage the patient in cardiac arrest in the prone position. As I had taken so long to decide on whether I would start CPR in the prone position or turn him supine I wondered what my colleagues would do. A quick departmental survey suggested that there was no consensus and indeed others took a long time thinking about the question I had posed to them.

The literature has about 20 case reports of patients who had a cardiac arrest in the prone position and a few studies that look at the effectiveness of CPR in the prone position.1,2,3,4

The history of CPR goes back to the 1740’s when the Paris Academy of Sciences first recommended mouth to mouth in drowning victims. 5 In 1891 the first documented chest compressions were performed by Dr Amazonio who closed the patient’s chest and inserted a finger into the trachea. 6 In 1930’s but abandoned soon after. McNeil in the late 1980’s modified this method and described the advantages of prone CPR, the reduced risks of gastric distension and need for mouth-to-mouth ventilation with improved learning and retention of skills.7

Akinson showed in a study using manikins, with a built in ‘skilimeter’, that chest compressions on the prone position are effective (measured by depth of compression), provided that a sternal counter support is used.8 9 The level of the 6th thoracic vertebrae (T6) is suggested as being some how this roughly corresponds to the level at which the hands are placed in conventional CPR. Mazer et al in 2003, published a study looking at the difference in success rates of supine CPR as it restricts the movement of the abdomen. 3 It would take at least 5 people to turn him supine; this would be time consuming and not ideal with an open back. Whereas the thoracic pump model states that sternal compression leads to compression of the right and left ventricle thus ejecting blood into the pulmonary circulation and aorta. Whereas the thoracic pump model states that sternal compression leads to a decrease in intra thoracic volume and therefore an increase in intra-thoracic pressure. The presence of competent venous valves and increased intra-thoracic pressure create pressure gradient and antegrade flow. It is suggested that the prone position corrects for the mechanical insufficiency of supine CPR as it restricts the movement of the abdomen.8 10

This increases compression efficiency allowing more forceful compressions and generates higher pressures in intra thoracic vessels and compressed vessels.

Defibrillation pad position is an important factor in effective management of ‘shockable’ rhythms. Case reports of successful defibrillation in the prone position have described placing the pads at the left apex and right axilla or placing one pad in the left mid axillary line and the other just inferior to the right scapula.11 The anterior-posterior position (one pad just left of the lower sternal border, the other posteriorly just inferior to the left scapula) could also be used with minimal movement of the patient. These positions balance ease of pad placement and amount of myocardium depolarized.

Within our department we produced a short video on how to perform CPR in the prone position (available on the trust intranet and YouTube).8 9 Our aim was to increase awareness and produce a consensus of how to perform CPR in the prone position, therefore improving team working in an emergency situation.

In summary it is suggested that:

• Basic life support may need to be started in the prone position
• Hand positions for chest compressions in the prone patient- place one hand either side of T6, or both hands over T6 (landmarks T7 – inferior angle of scapula, T14 – spine of scapula)
• Use sternal counter pressure (use either sandbags or 500mL bags of fluid)
• Place defibrillation pads in the anterior position (high risk patients place pads in the standard anterior – apical position before turning prone)

On re-surveying the departments’ opinions (during several more coffee breaks) 100% of anaesthetists said they would now start CPR in the prone position and knowledge on accepted land marks for hand position and defibrillation pads had improved with every respondent giving a valid answer. Our video has been a productive way to disseminate clinical information and achieved our aim of an initial uniform approach to this critical scenario.

Dr Sioned Phillips,
ST3 Anaesthesia, Dr M Mackenzie Consultant

Dr FJ Lamb, Consultant, East Surrey Hospital, Redhill

References
8. http://www.youtube.com/watch?v=AL-ZKsCN_o0

Hand positions for chest compressions in the prone patient-

• Use sternal counter pressure (use either sandbags or 500mL bags of fluid)
• Place defibrillation pads in the anterior position (high risk patients place pads in the standard anterior – apical position before turning prone)
Oxygen concentrators had been in use for some time, mainly for domiciliary oxygen administration, but there was increasing interest in their application in anaesthesia and reports of their use in operating rooms began to appear in the literature. Their potential was recognized in 1989 in the Overseas Development Administration (ODA) called a meeting of interested parties to discuss their possible inclusion in their Aid program.

In 1991, after reading an article in the World Anaesthesia Newsletter, Dr Roger Manley, who had previously introduced the Manley Ventilator, was inspired to create a low cost ventilator specifically for use in the poor countries of the developing world. Known as the Manley Multivent, it was entirely gas driven requiring a pressure of 140 kPa but designed so that the volume of dry gas required was limited to one tenth of the patient’s minute volume. The driving gas could be either oxygen or air or from a compressor. The ventilator was initially priced at £500.

Preliminary trials proved very successful and it was demonstrated at the WFSA Refresher Course in 1992. However, plans for its further development were cut short by the untimely death of Dr Manley later in 1991. Mrs Manley expressed a wish that the development of the ventilator should continue and the Porton company of Abingdon were asked to undertake this work. It was to be known as the Manley Multivent project to be supported by the ODA and the WFSA. It was tried in several centres in the UK and the first successful use was reported from Uganda in 1992.

Most oxygen concentrators at that time produced oxygen at a pressure of 25-30 kPa which is considerably short of that required to drive the Manley Multivent ventilator. However, the concentrator manufactured by Devilbiss was modified in such a way that, in addition to supplying oxygen, it had a second preset as compressed air at 150 kPa. It was thus able to drive the ventilator and could be used in combination with the Manley Multivent.

When electricity was available, the oxygen concentrator was the source, both of oxygen for the breathing circuit and of pressure to drive the ventilator. If the electricity supply failed, and the concentrator ceased to function, a reserve oxygen cylinder could immediately take over both functions. When oxygen from the reserve cylinder was required, conservation became extremely important. This was achieved in two ways. Firstly, the volume of gas required to drive the ventilator was only 1/10th of the patient’s minute volume. Secondly, the oxygen used to drive the ventilator was returned to the breathing system as concentration the inspired oxygen concentration.

The ability to continue to provide inhalational anaesthesia in addition to intermittent positive pressure ventilation in the absence of either oxygen or electricity was seen as a great advantage in those countries where such situations were not uncommon.

Throughout the period 1993-5 further modifications were made. An additional flowmeter for air was added and the design further modified by combining all the component parts into a single unit. A modification of the lower shell was the Manley Multivent ventilator, and the upper shell of the oxygen concentrator with an Oxford Miniature Vapizor. The lower shell was the modified Devilbiss oxygen concentrator. On the side of the frame were cradles for reserve oxygen cylinders and electrical sockets at the rear. In 1994, this unit went into production, initially under the name of the Oxyvent but because of possible copyright issues was renamed as the Glostavent.
TAX NEEDN’T BE TAXING

Disclaimer: This article tries to explain tax issues for anaesthesia trainees and where more information can be found. The authors are not trained tax advisors. Both the authors and the AAGBI are not able to offer professional tax advice, and will not accept responsibility for any liabilities. Contact a professional tax advisor or Her Majesty’s Revenue & Customs for more information.

To establish how commonly anaesthesia trainees have problems with pay or income taxation, we conducted a survey in West Midlands deanery. 310 trainees were emailed and 80 (26%) completed the survey. Questions asked were:
• have you had pay or income tax issues in your last rotation?
• have you ever had pay or income tax issues?
• have you had issues with student loan deductions?
• has there ever been tax paid during hospital induction and would that be beneficial?

Survey Results
71% respondents stated that they had pay or tax issues at some time. In their most recent post, 44% of trainees who responded had pay issues and 56% had tax issues. The main problems were: emergency tax code, wrong tax code, delay in the issue of a P45. Tax issues varied from £400 to £10,000.

23 of 80 trainees (29%) had student loans of which 15% had problems with loan deductions each time they rotated. 14% of the trainees paid tax or tax has not been explained to them during hospital induction. 61% said they would benefit from a payroll department presentation explaining pay and tax on each rotation.

This survey demonstrated that many trainees are having difficulties with their pay each time they rotate to a new hospital or regional hospital. As a result, we will try to explain tax codes, how to check you are on the right code, what you can claim as tax deductible income, how to check your pay scale and rates of pay.

Rates of pay
Don’t be fooled into thinking that “rates of pay” on your payslip relates to your pay scale. This number is your basic pay (before banding) and increases with increasing years of experience. The rate of pay you receive will also depend on any correct pay scale, look at the table on page 13 of the 2010 Pay Circular, available at www.nhsemployers.org/Aboutus/Publications/PayCirculars/Documents/Pay120Circular_MD_1_10.pdf.

Tax codes
The tax year runs from April 6th to April 5th. Your tax code is made of your basic pay and the banding who and how to complete tax return and tax deductable income

In their most recent post, 44% of trainees who responded had pay issues and 56% had tax issues. For those under 65 years of age, the personal allowance is £8,105. As the personal allowance can only be used once, it is likely that additional income (e.g. from locum work, property or savings) would need to be declared to HMRC. Additional income should have a tax code D0 to ensure higher rate tax is being paid.

If you have additional income (e.g. from locum work, property or savings) this needs to be declared to HMRC. Additional income should have a tax code D0 to ensure higher rate tax is being paid.

Self-assessment
You may need to self assess if you:
• receive more than £10,000 from savings and investments
• receive more than £2,500 from property after allowable expenses
• receive more than £2,500 from property after allowable expenses
• receive annual or trust settlement on which tax is still due
• receive income from the estate of a deceased person on which tax is still due
• earn more than £100,000 a year
• claim tax relief on professional subscriptions of more than £2,500
• are not normally resident in the UK

HMRC should contact you to ask you to self assess, but if the above apply, you should contact HMRC to register to self assess by October 5th or you may incur a penalty. You can self assess online. Further details on how to register for self-assessment are available at http://www.hmrc.gov.uk/register.htm

Bandings, who and how to complete tax return and tax deductible income

For detailed information on all the above topics, please refer to the article ‘An anaesthetist’s guide to income tax’ written by Dr Caroline Wilson & Dr Heidi Mounsey, Anaesthesia News, May 2012.

Recent changes
From 6th April 2013 employers will have to report Pay As Your Earn (PAYE) income tax information to HM Revenue & Customs in real time information (RTI). Employers are required to provide real time information about each PAYE payment they make and will also have to keep the tax codes accurate for trainees even during frequent departures. For more please see http://www.hmrc.gov.uk/payer/getting-started/index.htm

CCT applications are now tax deductible. For more information click the following link: http://www.legislation.gov.uk/uksi/2012/1126/pdfs/uksi_20131126_en.pdf

Dr Chetan Parcha, ST7, Queen Elizabeth Hospital, Birmingham
Dr Jennie Kerr, ST7, Good Hope Hospital, Sutton Coldfield

Extra income
If you receive additional income (e.g. from locum work, property or savings) this needs to be declared to HMRC. Additional income should have a tax code D0 to ensure higher rate tax is being paid.
Dear Editor,

We wish to report an unusual case of intussusception of the oesophagus into the pharynx. The condition was discovered when attempting laryngoscopy. The appearance of an oesophageal flap in the pharynx prompted further investigation (see photograph). On flexible endoscopy of the structure, it led to a blind end. We suspected this interesting anatomy may be congenital, but when the patient was referred to his manufacturer (Trucco, Bellst) for further investigation, it was discovered that the oesophagus had in fact been inverted inside-out. The structure was reduced into its correct position without complication.

We suspect this is the first documented case in this group of patients. We postulate that the most likely cause of our patient’s intussusception was vigorous retching following inadvertent failed tracheal intubation. We call on all anaesthetists to exercise caution and remain calm when removing tracheal tubes from the oesophagus.

Dr Ben Howes & Dr Nick Wharton,
Consultants in anaesthesia, University Hospitals Bristol NHS Trust

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Dear Editor,

During a routine pre-assessment of a 68 year old female patient for a total knee replacement I came across her ECG.

Having recently completed my annual re-read of ‘ECG made easy’, I struggled but failed to fit the structure that I had been assisted would never fail, to what was before me. The ECG machine, however, had no such difficulty. It diagnosed as many pathological processes as it could store in its algorithm as fast as it could print. According to the ECG, the patient should have been admitted straight to the coronary care unit. I had heard of the ‘tombstone’ appearance but what of ‘battlements’?

As it could print. According to the ECG, the patient should have been admitted straight to the coronary care unit.


Reference:

1. Varaday SS, Yentis SM, Clarke S. A homemade model for training in cricothyroidotomy. Society meeting and by our own trainees has been extremely positive and encouraging. This model would be a useful training aid for teaching inexperienced trainees. A consultant Questionnaire

Dr Hannah Smith, CT2, Royal London Hospital
Dr Rosel Tallach, Consultant, Royal London Hospital

Table 1. Results of the evaluative questionnaire

<table>
<thead>
<tr>
<th>Consultant Questionnaire</th>
<th>Results of the evaluative questionnaire</th>
<th>This model would be a useful training aid for teaching inexperienced trainees.</th>
<th>5 (4-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainees should use this model before “practising” on patients</td>
<td>5 (3-5)</td>
<td></td>
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<tr>
<td>Feedback was given in the form of an anonymous questionnaire (previously used by Varaday et al), the results of which are given below (Table 1).</td>
<td></td>
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<tr>
<td>The result is a simple but realistic model. This realism was confirmed when it was presented at a dedicated teaching station in a BOAS meeting. Seventeen independent consultant anaesthetists experienced in performing sub-Tenon’s blocks were invited to assess and evaluate the model.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>This model is an example of an extremely cheap, quick teaching video giving instructions on how to make and use the model. It is available in electronic format on request and is also currently being hosted on the internet (YoutTube) by going to the following link: <a href="http://www.youtube.com/watch?v=pC79MP9T3U">http://www.youtube.com/watch?v=pC79MP9T3U</a></td>
<td></td>
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</table>

Dr M J Allen, Consultant, Dept of Anaesthesia, Moorfields Eye Hospital, London
Dr C Kidel, StT, Department of Anaesthesia, Royal Free Hospital, London

Reference:


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Reference:

I remember sitting on a beach in Cape Town almost twenty years ago. The next day was Saturday and I was meant to be flying back to London, while my friend took part in a yacht race around the Cape of Good Hope. This is where the Atlantic Ocean meets the Indian Ocean and is a stretch of ocean I had always wanted to sail. I rang my travel agent. For a modest price I could easily change my flight and sail the long passage of the Indian. But for some reason I didn’t do it. I can’t remember why, I just remember regretting that I didn’t sail around the Cape of Good Hope when I had the opportunity.

Almost two years ago I resigned from my consultant post in the NHS. I now work as a Consultant Anaesthetist on the board of Mercy Ships. The question I am often asked is ‘What made you do that?’

Mercy Ships operates the world’s largest non-governmental hospital ship the Africa Mercy, which has 5 operating theatres and 5 wards (80 beds). Mercy Ships visits low income countries at the invitation of their government, providing specialised surgical services and healthcare education. Surgical specialties include maxillo-facial ENT, plastics and reconstructive surgery; general and thyroid surgery; paediatric orthopaedics; women’s health and obstetric fistula surgery; ophthalmic and dental surgery. In 2013 we have just completed 10 months in Guinea, the 10th poorest country in the world and performed approximately 2,600 operations and treated over 12,000 dental patients. The Five Operating Rooms (OR), are predominantly staffed by short-term volunteers (surgeons, anesthetists, nurses) who come for an average of 2-3 weeks.

I first heard about Mercy Ships in the early 1990’s as a medical student in the Caribbean. I was captivated by their vision to use hospital ships to transform individual’s lives by providing free healthcare and improve the quality of care in impoverished nations. It took almost 15 years before I had the necessary experience to volunteer. In December 2005 I worked for 3 weeks on the ship in Liberia and was gripped. The work, the place, the people I met (crew and patients) were fascinating. My professional skills were utilised more than they had ever been, and my compassion for the poor was ignited. I did four more short-term trips and then 6 years later I decided to become a full-time volunteer.

This summer over beers and a curry, someone asked me, ‘Tell me Michelle, what really made you give up your consultant job?’ After our conversation, I realised for me the question was much more, ‘what did it take to follow my dream?’

I have worked with over 50 different anaesthetists and assistants from approximately 20 countries, which has exposed me to a diversity of anaesthetic practice and training. This coming Field Service in Congo (August 2013 – June 2014) I am responsible for our healthcare education plan. I have met with the Ministry of Health and Africa Mercy Operations, surveyed the hospital facilities and collated requests for training by Hospital Directors and senior doctors. The plan includes training for biomedical engineering, sterile processing, nursing, anaesthesia, surgeon mentoring, hospital administration and leadership, thereby aiming to train the whole ‘surgical ecosystem’. The scope of work and degree of responsibility is certainly professionally challenging and I am thrilled to contribute to improving health in these countries.

We have successes and failures. In Sierra Leone, 2 year old Josephine needed life-saving and tracheal surgery which no-one in Sierra Leone could provide. Luckily we could provide what Josephine needed so she survived. However in Togo, 10 month old Chara was not so lucky. We did what we could, but the ship was leaving. Chara then went to a public hospital for further treatment but no anaesthetist was prepared to anasthetise such a small baby and so Chara died. I have a dream that eventually every African country will have proper anaesthesia services. Is that too big a dream? ‘Mercy Ships is continually asked would it be impossible to do these things deter me? No. I am inspired by people like William Wilberforce – a reformer who spent his life campaigning for the abolition of slavery, something many thought was impossible. He faced discouragement in the form of difficult circumstances, repeated failures, criticism and ridicule. The film Amazing Grace vividly portrays Wilberforce’s courage as he pursued his dream foreseen, and the modern legislation was passed. Wilberforce died before he saw slaves actually freed. Will I live to see my dreams of better anaesthesia and healthcare services in Africa come true? In some small ways, but not big changes. But I don’t have to see such a long term dream accomplished to feel fulfilled because I realise I am a cog in a bigger picture slowly producing change. Again faith helps. Have you ever thought what legacy you would like to leave?

When I announced I was leaving to work with Mercy Ships, several people thought I was mad and some still do! But the overwhelming reaction from colleagues, friends and family was one of admiration and total support. A few actually seemed angry, as my decision seemed to preconceptions of jealousy and abandonment in them. However I remembered how much I regretted not sailing around the Cape of Good Hope. I didn’t want more regrets. I wasn’t going to let passivity, fear of the future or fear of what others think, stop me. The mission statement of Mercy Ships is ‘Mercy Ships aims to transform individual’s lives by providing free healthcare and improving the quality of care in impoverished nations’. I want to use my life to change the circumstances around me. I want to be the thermostat not the thermometer.

So the next question I got asked over curry was, ‘is it the passion for your job or your Christian calling that motivates you?’ Answer: Both.

The difficult airway experience is phenomenal. And the more of these airways I see the more I learn, be they due to tumour, trauma or congenital airways. The difficult airway experience is one of my professional skills utilised more than any other. I have had the opportunity to admit when I have got things wrong, or could have done things better. It takes humility to rely on others emotionally, professionally, spiritually and financially. I have had to develop my professional skills as well as my character. And many of you to continue to encourage and support me now. There are undoubtedly people reading this who are better qualified than I am. But I am one of the few that I have faith in a God who can help me do the things he has called me to do. This is where my Christian calling takes over from the professional challenge.

Many people have asked me what I plan to do when I finish with Mercy Ships and come back to a changing NHS, competing for a job again. The professional answer is keep my CV up-to-date, keep my name in front of the up and coming Specialist Trainers by continuing to write papers, teach and speak at meetings, never say no to an invitation to gain a line on my CV! The interview answer is to explain why I have been doing overseas volunteering is useful to the NHS by referencing the recent report ‘Improving Health at Home and Abroad’. How overseas volunteering from the NHS benefits the UK and the world by the All-Party Parliamentary Group on Global Health. My Christian answer is I trust in a God who knows me and who has ‘plans to prosper me and not to harm me, plans to give me a hope and a future’. That’s all part of the situation and it’s where faith comes into its own. I have seen extraordinary things here in Africa and also back home in England, that testify to the supernatural power of God. So I stand on these experiences and the promises of God.

Ultimately, I don’t want ‘to be ruled by life’; instead I want to ‘rule in life’; by that I mean I don’t want to be defined by life’s circumstances. I want to use my life to change the circumstances around me. I want to be the thermostat not the thermometer.

How about you? What do you want to change? Where will you get your courage from? Another beer anyone?

Dr Michelle White, Consultant Anaesthetist, Mercy Ships

When I announced I was leaving to work with Mercy Ships, several people thought I was mad and some still do! But the overwhelming reaction from colleagues, friends and family was one of admiration and total support. A few actually seemed angry, as my decision seemed to preconceptions of jealousy and abandonment in them. However I remembered how much I regretted not sailing around the Cape of Good Hope. I didn’t want more regrets. I wasn’t going to let passivity, fear of the future or fear of what others think, stop me. The mission statement of Mercy Ships is ‘Mercy Ships aims to follow the 2000 year old model of Jesus bringing hope and healing to the world’s forgotten poor’. I want to be part of this dream, whatever the cost. So I took a step into the unknown with only my faith to support me. On board ship, I would have to share a bedroom with 3 people, share an internet connection with 400 people at a bandwidth usually reserved for a family of 4. Not lie, the ship alone and spend a maximum of 2 minutes in the shower. Amazingly I wouldn’t earn a salary, but have to pay for the privilege of working. My friends and relatives would literally need to support me. These were just some of the costs of following my dream.

References:

Acknowledgements
I would like to thank the AAGBI IRC for financial contributing towards my costs.

Further Information
Mercy Ships: www.mercyships.org.uk
My blog: www.dmichellewhite.blogspot.com

Volunteers need to be post-FRCA Specialist Trainees or Consultants. You can contact me at mwhite@mercyships.org.uk for further information, but official applications are all processed via the website.
The Great Anaesthesia Bake
Launched at the GAT conference in April 2013.

Due to its success, we are extending the Great Anaesthesia Bake to June 2014!

Calling all those hospital anaesthetic departments who have not yet held a bake sale, now is your chance.

Swap the oxygen masks, endoscopes and needles for aprons, ovens and mixing bowls and get baking! Whether you have a penchant for cookies, cakes, pies, scones, pasties, sausage rolls, flans or bread, we want to you raise as much ‘dough’ as possible for Lifebox – making surgery safer in low-resource countries.

Download a fundraising pack from the AAGBI website: www.aagbi.org/international/lifebox/bake

Lifebox UK-registered charity (No. 1143018) making surgery safer in low-resource countries by providing essential equipment and training to every operating theatre worldwide.

Over £13,000 raised in aid of Lifebox

Too many delicious cakes and not enough space! If you don’t see you photos here, visit the Lifebox Facebook page to find them: www.facebook.com/lifeboxfoundation
It seems incredible that any surgeon is not concerned about safety and avoiding adverse incidents affecting patients they are treating. Perhaps, as Professor Elliot points out, it is not that we don’t care, but that we don’t often think about the problem and prepare for mistakes in a way that really engages the whole team. I would suggest anyone reading this incredibly insightful, yet simple, approach to reducing error would be hard pressed to disagree with any of the “Ten Commandments”. Perhaps, if we all adopted this approach to clinical practice, we would start to make a difference, not only to reducing avoidable errors but also in improving who our surgical teams work and function.

“First, do no harm” is at the core of medical practice, yet being a surgeon in hospital remains one of the most dangerous activities that humans undertake, on a par with mountain climbing. Over years of practice, and with a real interest in patient safety, I have identified a series of statements which help me in my attempts to avoid harm. I have grouped them together as 10 Commandments and hope they will help readers keep patient safety at the top of their agenda, and agree with any of the “Ten Commandments”. Perhaps, as Professor Elliot points out, it is not that we don’t care, but that we don’t often think about the problem and prepare for mistakes in a way that really engages the whole team. I would suggest anyone reading this incredibly insightful, yet simple, approach to reducing error would be hard pressed to disagree with any of the “Ten Commandments”.

As surgeons, we live in a world where human factors predominate. 60 to 70% of hospital budgets are spent on staff, reflecting the importance of relationships. If we consider ourselves to be ‘liveware’ with attitudes, stresses, cultural pressures, our own attitudes and knowledge, then we have to interact with others with the same personal factors, with various forms of hardware (monitoring etc), with the software of policies, manuals and protocols and all in the context of external organisational or political pressures. These interactions make up the Human Factors with which we have to deal effectively to do our jobs well. However, each of these interactions also has the potential to fail, resulting in poor quality care or a bad outcome.

One needs to bear the likelihood of such failure constantly in mind if one is to avoid it. I have found the following question (which I ask myself every day and for every patient) to be culture changing and constantly challenging: “Would this quality of care be acceptable to me or my family?”

As a patient or parent, I would expect the medics to get my treatment right first time and without cock ups. As a surgeon, I need to respect that and remember the care values of providing safe care, with good outcomes, in the context of good experience for the patient. I must tell the truth to create trust, and each of these values underpin all that I do. Thus, giving weight to the existence of adverse outcomes and doing all that I can to prevent them is core to my work as a surgeon. By acknowledging that adverse events are important, you give them the mental space needed to avoid them.

### 1. Adverse events are important

As a patient or parent, I would expect the medics to get my treatment right first time and without cock ups. As a surgeon, I need to respect that and remember the care values of providing safe care, with good outcomes, in the context of good experience for the patient. I must tell the truth to create trust, and each of these values underpin all that I do. Thus, giving weight to the existence of adverse outcomes and doing all that I can to prevent them is core to my work as a surgeon. By acknowledging that adverse events are important, you give them the mental space needed to avoid them.

### 2. Human error is inevitable

There is an old adage: ‘prepare for the worst, it tends not to happen’. If you anticipate that adverse events are likely to occur, then you can do all you can to mitigate that risk. By thinking ahead, even though you may not be able to prevent the event, you should have thought through what to do if it did happen; a get-out strategy. A clear example of this is seen week-by-week in the Formula One season. We can observe the consequences of good planning and a commitment to safety, overseen by the late, lamented Professor Sid Watkins.

### 3. Anticipate adverse outcomes

No one gets up wanting to make a mistake, yet anyone working in accident investigation or organisational psychology will tell you that any human can make a mistake, even the most experienced and senior. Given that 60 to 70% of an NHS Trust’s turnover is spent on staff, it is not surprising that human error is often at the root of adverse events. But we DO all make mistakes, and remembering the Swiss Cheese Theory makes us think about what we need to do to mitigate that risk.
4. Plan what you are going to do, with the whole team

You must involve them in what you are intending to do, and make sure they are up for it and have the right kit etc available for good and bad outcomes. Clearly, if you are involving them, this rule is all about effective communication and your willingness to believe, as you travel about, surgeons are not uniformly able to deliver without help. Briefings, checklists and discussion are critical to this as the WHO checklist programme has shown (and as everyone who flies recognises by their repeated survival). Medicine is changing.

Our concept of professionalism used to be a doctor, with leather patches on his (and it was a he) elbows, who knew everything and was confident enough to say so. We know now that none of us can know everything, and in the digital age, especially in my field, patient and parents have grown up with smart phones and know just as well as I do how to access Google and YouTube. They know as much as we do, just not how to interpret it. We need to work with them as partners in a team, and we all need to recognise that we work in teams. Thus we must...

5. Communicate. It all about communication

Communication is not just telling, it is listening to the rest of the team and hearing what they have to say. If someone or something is missing or there is an equipment problem, don’t press on and pretend it’s not happening. It may well be the patient who is missing.

6. Respect the patient

I can almost hear the cries of “Duh, of course we respect the patient!” Actually, I have been horrified by how often that is clearly not the case. Someone has loaned to you their loved one for a period of time, for you to treat. They are not your patient or a VSO. They are a person, a child, someone’s child, someone with a name, a personality and a life. Not an organ or a disease, but a person.

After a terrible never event happened at the Beth Israel Hospital in the USA, despite a checklist, the CEO and CMD introduced something they termed ‘the moment of reverence’, a term which may not have much leverage in the secular UK, but which accurately reflects the principle. After briefing, checking and prepping, take a moment out, as a team, to remember who this person is on the table, and how important they are to others, not to you. Such a moment’s pause keeps it personal and gives the patient due respect. It aids reflection and concentration, and reminds everyone of the potential and importance of avoiding error. If you want to hear important respect and truth from true drivers emerge unscathed from the most horrendous aviation event. Watkins, as partners in a team, and we all need to recognise that we work in teams. Thus we must...

7. Check

It is, of course, vital to check that everything is OK. We now know that the best way to do this is to use checklists. The WHO checklist project has worked, and lives have been saved, wrong procedures avoided and complications reduced. There is no excuse for surgical teams not using a checklist, in the same way there would be no excuse for the airline pilot taking off without checking the situation and systems. Engage your team in checking; it is often useful to get the most junior person to read out the list to ensure it is all done. It engages them and influences the culture.

8. Do it once and do it right

Don’t take short cuts; think about what you are doing and check with your team, and by now you will have encouraged them to tell you if you are heading for an error. They are your friends and not your enemy. Let them protect you and the patient.

9. Debrief and learn

This is probably the thing we do least well as surgeons. If we were the Red Arrows, we would de brief religiously as a team, after each display and analyse minor errors in the pursuit of perfection. I have seen very few surgical teams do this after surgery, but there is so much to gain. Near misses can be identified, experiences shared and new processes and protections evolved. It induces respect amongst team members and fosters a spirit of continuous improvement; vital for a successful organisation. If we only had ‘Black Boxes’ in the operating room, including video and audio, we would be able even better to analyse our work.

10. Measure, share and improve

Accurate data is the only way to effect rapid change and improvement. The plural of anecdote is not data, so we need to be sure that we put in place relevant quality control metrics to monitor, present and use as a basis for improvement. Good examples of such modes of presenting data are SPC (statistical process control) charts, and CUSUM charts, both of which are relatively easy to set up and can be used to monitor both success and failure of any event. Doctors and nurses are inherently competitive, so if you show them how they are performing in relation to their peers, even anonymously, they will try to improve, without doubt. I think Steve Hanson, the All Blacks coach, got it right in December 2012 when he said “Don’t ask us how good we are. Just be aware that we are going to get better”. We know the All Blacks are a great side, but they are never satisfied; continuous improvement is what they are about. That, too, is our responsibility as surgeons. Nobody jumps higher by lowering the bar.

Martin Elliott, Co-Medical Director, Director of the National Service for Severe Trachal Disease in Children, Great Ormond Street Hospital for Children NHS Foundation Trust

Lest we forget: learning and remembering in clinical practice

Smith A

The editorial accompanying the above articles asks important questions about why it is that we fail to learn the lessons of past mistakes. The complexity of our working practices, and the comparative rarity of adverse events mean that we don’t “see” them until prompted, even though, and perhaps because of the fact that there are a multitude of sometimes contradictory guidelines published in response to various incidents. A cogent argument in favour of a collective memory of their causes and problems is made; alongside the formal guidance and crisis management checklists, we need to feel that the mistakes of the past are real to us, so that our patients are not harmed needlessly. Patient safety remains a top priority of the journal, and we would like to read more from anaesthetists and intensivists of all grades who value it.

References

5. Hayes A B et al. NEJM 2009;360:491-9
6. Editor’s note – this article was first published in the Journal of the Association of Surgeons of Great Britain and Ireland in March 2013 and is reproduced with their permission.

A.E. Vercueil, Editor, Anaesthesia

N.B. the articles referred to can be found in either the latest issue or on Early View (ePub ahead of print)
Symptomatic local anaesthetic toxicity and plasma ropivacaine concentrations after transversus abdominus plane block for Caesarean Section.


Background
Caesarean section is a surgical procedure where transversus abdominus plane (TAP) blocks are commonly used to provide post-operative analgesia. Physiological changes in pregnancy increase the susceptibility to local anaesthetic toxicity. Local anaesthetic toxicity in pregnant women undergoing neuraxial blockade is well recognised. This study aimed to quantify plasma ropivacaine concentrations in patients undergoing TAP blocks after elective caesarean section.

Methods
This prospective observational study involved 30 patients undergoing elective caesarean section under spinal anaesthesia. Ultrasound guided TAP blocks were performed. Participants received 2.5mg Kg⁻¹ of ropivacaine diluted with 0.9% saline to a total volume of 40ml (20ml each side). Local anaesthetic doses were performed. Clinical signs and symptoms of local anaesthetic toxicity were also assessed. A plasma toxicity concentration of 3.2μg ml⁻¹ was based on reported plasma levels from scalp blocks.

Results
At 30min post injection the mean (standard deviation (SD)) peak ropivacaine concentration was 1.82 (0.86)μg ml⁻¹. The mean (SD) time of the maximum concentration was 30.5 (5.7) min. The highest concentration noted was 3.76 μg ml⁻¹ which occurred in a 10 minute sample. In the first hour of sampling plasma concentrations exceeded the potentially toxic level of 2.2 μg ml⁻¹ in 12 patients. Three of these patients described local anaesthetic toxicity symptoms. The mean (SD) peak levels in these patients were 2.70 (0.84) μg ml⁻¹. All symptoms resolved without complications.

Discussion
The study demonstrates that women receiving TAP blocks for caesarean section can exhibit symptoms of local anaesthetic toxicity. As three patients exhibited symptoms of local anaesthetic toxicity with plasma concentrations of greater than 2.2μg ml⁻¹, the authors suggested that 2.2 μg ml⁻¹ should be quoted as the toxicity threshold of ropivacaine when used in TAP blocks. There is no current guideline on dosage for local anaesthetic toxicity for TAP blocks at present.

Conclusion
This study suggests that TAP blocks for patients undergoing caesarean section may result in elevated plasma ropivacaine concentrations, which could be associated with neurotoxicity.

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References

First Robotic Ultrasound-Guided Nerve Blocks in Humans Using the Magellan System

Anesthesia & Analgesia 2013; 116: 491-4

After success adapting the surgical DaVinci robotic system to assist nerve block performance in phantom models, a more specific robotic system (Magellan) has been developed for use in humans.

Methods
A pilot study was performed to assess the feasibility of using the Magellan robotic system for performing nerve block procedures. Inclusion criteria were patients aged 18-70 years undergoing lower limb procedures with planned sciatic nerve block. Exclusion criteria included contraindication to nerve blockade, local anaesthetic allergy and peripheral neuropathy. The Magellan was used post-operatively to perform sciatic nerve blockade in the popliteal fossa.

The Magellan consists of a joystick, robotic arm and a software control system. Ultrasound-guided nerve identification was performed manually with images displayed on the screen of the control system. On identification of the sciatic nerve, the probe was held in position and the Magellan operated manually. The joystick controlled the movements of the robotic arm and a nerve block needle, attached to the end of the robotic arm, was directed out of plane to the sheath of the sciatic nerve. When the wire was satisfactory, 0.25% bupivacaine was injected. Once local anaesthetic spread around the nerve was confirmed, a further 30ml were injected. The primary outcome was success of the procedure (ability to insert a needle into the nerve sheath and inject local anaesthetic around the nerve). Secondary outcomes included performance time (start of ultrasound assessment to the end of injection), robotic time (time from identification of the needle to end of injection) and skin to nerve distance. Sensory and motor block were not used to assess block success.

Results
Thirteen patients underwent 16 nerve blocks (three undergoing bilateral procedures). All blocks were successful with confirmed local anaesthetic spread around the sciatic nerve sheath. Secondary outcome measures, as measured on Independent Lens™ (Teleflex, PA), included performance times 189 (±92) seconds, robotic time 164 (±21) seconds (73-217) seconds and skin to nerve distance of 14 (±1.24) ±5.6 mm.

Discussion
A new robotic system to perform nerve blocks has been developed. In this first human feasibility study, all blocks were successful and without complications. There are limitations: the technique requires bimanual coordination (one hand operating the ultrasound, the other guiding the needle with the joystick), and requires manual injection once the needle is in position. In the future, automated injection may be possible.

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References

Anaphylaxis to neuromuscular blocking drugs: incidence and cross-reactivity in Western Australia from 2002 to 2011

JA Anaesth 2013; 110:981-987

The AAGBI states that neuromuscular blocking drugs (NMBDs) are implicated in 8% of anaphylaxis episodes. It has been argued that such estimates are based on over- or under-diagnosis. Furthermore a sample size of 7 million would be necessary to achieve p<0.05 if the true incidence is 1:500. Offering a dataset of over 1 million patient exposures, this study attempts to more accurately estimate the true patterns of incidence and cross-reactivity.

Methods
Data was obtained from the Western Australian Anaesthetic Drug Reaction Clinic, a national referral centre for intraoperative anaphylaxis. Patients were diagnosed with NMBD anaphylaxis using standardised diagnostic criteria - plausible time lapse after NMBD administration, positive response at skin prick testing. The study group comprised patients diagnosed between January 2002 and December 2012:

The total number of exposures to NMBDs was extrapolated from sales figures obtained from an independent healthcare information agency using the ED95 dose for a 70kg person. Since succinylcholine is frequently drawn up and discarded unused, cases excluded from this step. The total number of exposures within the region was calculated to be approximately 1.16 million.

Results and Discussion
66 patients were diagnosed with anaphylaxis to NMBDs. 81% of these patients were female, with ages ranging from 5 to 91 years (mean age 49, SD 18 years). The rate of histamine-mediated anaphylaxis to succinylcholine was twice that of vecuronium (p<0.001).

Forty-five reactions were triggered by vecuronium, seventeen by succinylcholine, nine by vecuronium, seven by atracurium and three by mivacurium. Of the intermediate-acting NMBDs, rocuronium was found to be the culprit in 71% of NMBD anaphylaxis (9.0 episodes per 100 000 exposures), with 49% of the market share. Comparatively vecuronium caused 14% (2.8 per 100 000), with 28% share and atracurium 11% (4.0 per 100 000) with 15% share.

Vercuronium showed the most cross reactivity (though n=16), with 78% also reacting to succinylcholine and other non-competitive relaxants, 25% reacting to atracurium. Patients most frequently cross-reacted with succinylcholine, whatever the primary causative agent: conversely, succinylcholine reactions showed low rates (5-24%) of cross reactivity with other NMBDs, consistent with the hypothesis that its structure facilitates less specific IgE binding than other agents.

Those reactions primarily to vecuronium showed no cross-reactivity to other NMBDs, though predictably 57% cross-reacted with atracurium. Of those initially reacting to atracurium, cisatracurium appears the safest option, with no vecuronium allergic patients and only 5% of the rocuronium allergic cross-reacting.

Georgina Neal
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References
4. Baldi, BA et al. On the origin and specificity of antibodies to neuromuscular blocking drugs. Clinical & Experimental Allergy 2009; 39: 325-44

Anaphylaxis to neuromuscular blocking drugs: incidence and cross-reactivity in Western Australia from 2002 to 2011

JA Anaesth 2013; 110:981-987
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