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A few weeks ago, Dr Rob McDougal from Melbourne contacted me and said he had just returned from the ASEAN Congress of Anaesthesia in Indonesia and had been tremendously impressed by a lecture he had heard given by Dr Eddy Raharjo. He suggested that the lecture deserved a wider audience. I agree and have reproduced Dr Raharjo’s Quentin Gomez oration in this issue of World Anaesthesia.

In his lecture, he draws attention not only to vast economic differences that exist between countries in South East Asia but also to the differences that exist within them. In Indonesia there are only 400 anaesthesiologists serving a population of 220 million. Although the relatively affluent in the big cities have access to First World anaesthesia, the poor in rural areas get no anaesthetic service at all. Dr Raharjo makes a plea for all anaesthetists, doctors and nurses, to be competent in a range of safe anaesthetic techniques and not to regard the older agents like ether and halothane as out-dated and not worthy of their attention. Safety is what matters, not the latest agents.

In his article on Bier’s block, Dr Viscomi revisits an old technique, first described over a hundred years ago. He describes how the addition of agents found in most anaesthetic cupboards such as ketamine and neostigmine, if added to the local anaesthetic solution, can shorten the onset time of the block and improve its quality. Surely, a simple and safe technique that is worth trying?

Finally, Mr Banda, an anaesthetic officer working in Malawi describes his experience in adding pethidine/meperidine (10mg) to the local anaesthetic solution for spinal anaesthesia. He was able to prolong the period of post-operative analgesia after caesarean section, but not by as long as he had hoped. Spinal pethidine is a technique I have used for many years after being told about it by Prof Don Moyes in Johannesburg. I have found it to be a very reliable and safe technique that did give useful post-operative analgesia. However, like Kafle (referenced in the article) I used a larger dose (1mg/kg) of pethidine alone without local anaesthetic. Pethidine is cheap and generally available when other agents are not. Intrathecal pethidine may not be a perfect technique but it is simple, appears safe and is well worth trying.

William F Casey

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The Work of the WFSA Pain Relief Committee

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The WFSA Pain Relief Committee has set itself certain goals.
1. To collect data on the status of pain relief in less affluent countries. This is proving to be difficult.
2. To sponsor articles on Pain; one on “Pain Relief in Difficult Situations” has appeared in Update 15.
3. To organise workshops on pain management.

The Pain Relief Committee took advantage of the presence of several of its members at Kuala Lumpur for the 11th Asian Australasian congress of Anaesthesiologists. We held email discussions prior to the meeting and planned to run our first workshop at the WFSA training centre, Siriraj Hospital, Bangkok followed by similar workshops at Sri Lanka, Bangladesh and Indonesia. Prof. Thara and Prof. Pongparadee (Bangkok), Prof. Iqbal and Dr. Aziz (Dhaka, Bangladesh) Dr. Nalini and Dr. Deepthi (Colombo, Sri Lanka) and Dr. Eddie (Surabaya, Indonesia) readily agreed to organize the workshop at their respective places and provide food and accommodation for the faculty. Dr. Angela Enright, the chair of the WFSA Education Committee, kindly agreed to support the add on travel expenses of the faculty from Kuala Lumpur.

The scientific programmes were prepared according to the need of the specific place and in consultation with the local faculty.

At the Siriraj Hospital, Bangkok (WFSA Training Centre), the theme of the workshop was “Peri-operative pain management and regional analgesia”. Over 200 persons registered. Most were postgraduate students and private practitioners. The faculty, visitors and local practitioners at the Siriraj Hospital, includes Drs Roger Goucke, Dilip Pawar, Ramani Vijayan, Pongparadee, Preecha O, Sureerat C and Trima C

The course was held over two days 13-14th July 2002. A comprehensive programme enabled the following topics to be discussed. Basic Sciences:
- Basic mechanism of acute & chronic pain
- Pharmacology of local anaesthetic and other pain relieving medications.
- Discussion

All the blocks were discussed using the same three parts format
- Anatomy of the block with slide projection and surface anatomy on a model followed by
- Video presentation of technique of block and
- Clinical application in pain relief.

Among the blocks considered were:
- Central Neuraxial Block (spinal, epidural and caudal blocks)
- Peripheral nerve blocks (upper limb and lower limb blocks, brachial plexus blocks
- Common Paediatric Blocks
- Labour analgesia

Ample time was allowed for questions and answers during each session. Interactive session with the audience allowed a variety of cases involving all categories of patients to be discussed

On 15th July we were joined by Dr. Ramani Vijayan who delivered a talk on “Strategy to develop an acute pain service.” This was followed by a wide ranging discussion between the faculty and those in the audience involved and interested in setting up an acute pain service. This discussion helped to support the Department’s submission to the hospital administration.

We split up after the Bangkok meeting: Roger Goucke travelled to Dhaka, Dilip Pawar to Surabaya (Indonesia) and Ramani Vijayan to Colombo.

On 16th July 2002, Roger Goucke delivered the second Syeda Feroza Begum Memorial lecture on “Chronic and Cancer Pain” hosted by Bangladesh Pain Society. The lecture was attended by over 200 medical practitioners, from a wide range of disciplines.

The following day at Dhaka Medical School patients with chronic non-cancer pain were presented by post-graduate students and their management discussed. This was followed by a demonstration of some of the common pain relief procedures in the operating theatre with pain unit staff and post-graduate students participating.

Meanwhile Dr Pawar had travelled to Surabaya in Indonesia and lectured to students and faculty of the Dr Sutomo Hospital of Air Lange University on “Regional Blocks and Pain Management” on 17th July. He demonstrated some of the more common blocks (spinal, epidural, combined spinal epidural, sciatic, femoral, and brachial plexus blockade in the theatre to a limited number of participants. A video film of the blocks demonstrated was made and shown to a wider audience and their clinical application discussed.

The following day was devoted to paediatric anaesthesia. In the morning, a demonstration of the induction and maintenance of anaesthesia in children was given. Some of the common paediatric
blocks such as caudal, single shot and catheter (with tunnelling), posterior approach to sciatic nerve and penile block were also demonstrated. This was followed by a talk on “Changing trend in paediatric anaesthesia practice” and an interactive session on pain management in children concluded the proceedings.

In Colombo, Dr. Raman Vijayan spoke at the Post-Graduate Institute of Medicine of the University of Colombo to 35 postgraduate students preparing for Final MD exam. Over two days, he lectured on recent advances in pathophysiology of pain, post operative pain management, the management of cancer pain and conducted tutorials and mock vivas on a variety of regional anaesthesia, and pain related topics.

Feedback from all four centres, Bangkok, Colombo, Dhaka and Surabaya, was overwhelmingly positive with the interactive sessions and the teaching on paediatric anaesthesia being particularly appreciated. The only adverse comment was of some difficulty with language.

Our Comments

Some members of the WFSA Pain Relief Committee (Roger Goucke, Ramani Vijayan, Dilip Pawar and John Clerk) had an informal meeting at the IASP World Congress of Pain in San Diego. It was noted that,

- Anaesthetic facilities and level of practice was well advanced in many of the countries visited. For example, some of the faculty members at Bangkok had received excellent training and were doing very good work.
- In major metropolitan cities, it appeared that awareness of pain relief techniques was reasonable. However it is difficult to quantify how these measures are used in actual patient care (probably not adequately).
- There is a need to make available workshop in on pain in semi urban and remote areas or to those who work there.
- It was felt that local faculty participation is important to get a feel of the place, for instance, the local faculty at Bangkok presented in the Thai language with English slides!
- Faculty coming from similar background who has undergone and understand the difficulties encountered in developing countries are probably most appropriate.
- It was felt that there was a need for similar workshops in many other parts of the developing world.
- Over all, it was great learning experience for all of us.

Education for the Future of Anaesthesiology

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On behalf of the Indonesian Society of Anesthesiologists and the people of Indonesia, we welcome you to the city of Surabaya. Welcome to this vibrant city known at “Kota Pahlawan” or the “City of Heroes” because it was here in Surabaya that the real fight for the freedom of Indonesia started in November 1945.

In the past three years, the world has witnessed major cultural and political changes on a scale never before known. Whilst some regions became unions of powerful countries, others became divided and crumbled into chaotic fighting masses with people killing each other without apparent reason. Our atmosphere becomes polluted with distrust and suspicion. The image of millions of people is distorted by a handful of their number who are terrorists. Now that we are here, can’t we try to put an end to this and make peaceful world co-existence a reality?

ASEAN (Association of Southeast Asian Nations) has been around for many years. Economic and cultural co-operation have become realities. A regional open market has been discussed and planned. What has anaesthesiology to do with all of this?

Let’s look at the disparity that exists between our countries. In the near future, the next 10-20 years, Indonesia or Cambodia will not reach the current level of Malaysia or Singapore. Let us also look at the disparity within countries and here Indonesia is a good example. In Jakarta and the other big cities where 20% of the population live, the standard of anaesthesia is similar to that in modern countries elsewhere: just name it, sevoflurane, ropivacaine, continuous spinal epidural anaesthesia; it’s there. But what about anaesthesia for the other 80% of the population living outside the big cities? When will a woman in prolonged labour, exhausted and with a high risk of dying get her right to a timely Caesarean section in the hands of the “great doctors” born and raised in this country? With only 400 anaesthesiologist serving a population of 220 millions, the answer is never.

We live in a region of the world with a most heterogeneous mixture of races, cultures, languages and levels of welfare. We gather here in a degree of comfort that many of our people can never dream of. We are here partly at the expense of our less privileged brothers and sisters living in difficult places. Our history has witnessed multiple colonisations and unnecessary wars that have taken the lives of unfortunate millions. What can we learn from history in order to enable us to shape our future in a different better way?
Can we picture the sad reality of the mothers who need a caesarean section but cannot afford the high cost anaesthetics we are used to working with in our modern operating theatre? How many of them are unable to cross the price barrier and surrender to the fate of natural death instead? Why shouldn't we work together to solve part of this big issue?

The key determinant of this big issue is education. Through education we bring progress and welfare. It is our duty to educate our people.

We cannot do this by just sending people away to first world countries. Why? Because they will return with a totally different mindset that gives way to a feeling of helplessness when working with limited resources and minimal facilities. Then the same sad story starts again: looking for ways of getting donations and depending on loans from rich countries to solve our problems.

Education is not lecturing. It is not like me standing here and telling you what to do. Education goes beyond all that. It is about changing behaviour, changing mindset. It is about teaching new life skills. It is about consensus development with everyone learning from what has been decided.

Indonesia has developed the anaesthesia care team that includes nurses. However, this system is not intended to grow the American way. We are working in co-ordinated teams not in financial competition. Several other countries are exploring similar systems of co-working; New Zealand and the UK to name but two.

We are also extending specialist programmes that are more outcome orientated in terms of both quantity and quality. The present shortage of anaesthesiologists has created a vacuum that is being eyed as a financial opportunity by many rather than as a need to serve the community. New private hospitals are being built to cater for the 5% of the population that is financially secure with an annual income in excess of $20,000 yet at the other end of the spectrum; the services for the less privileged community with annual incomes less than $1000 remain poor. The disparity is further exaggerated when foreign doctors come to exclusively join the upper class service.

This important issue should not be left to the politicians. It becomes our duty.

The lower paid population will never be able to aspire to the standards enjoyed by the better paid. The answer is not providing one single solution but two.

What we sell under the name “anaesthesia” is actually safety. Safety may mean sevoflurane and propofol or ketamine and ether. How confident are we with the old drugs? How do you explain that an old but experienced nurse in West Papua who has been administering ether to sick patients has no apparent anaesthetic deaths while the anaesthesiologists in the big cities are filling in cardiac arrest forms after using isoflurane?

In education we need a standard. A practicing anaesthesiologist in Indonesia should, I believe, be able to work in both ways: in modern surroundings and in places with few facilities. A doctor is supposed to be versatile. The underprivileged many should be a priority.

Education may serve to help achieve this. If we can agree to a standard to which our future doctors must comply then we are homogenising good patient care. High paying patients will get the first class service they can afford. At the other end, the less privileged patient will get a different but equally safe anaesthetic, paying the amount he can afford.

We think that this is a better self-sustaining solution than letting the poor patient wait in a queue for a donation from a NGO or a government social fund. We must sit down and work out how we can seriously co-operate to achieve this.

Through joint education and joint examinations we can offer a uniform ASEAN doctor able to offer patients from both communities, the rich and the poor, a safe and proper anaesthetic service. These doctors could work anywhere in ASEAN without causing envy in some or discouragement to others. This is of prime importance for the peace of our region.

Ladies and gentlemen, may I end this speech with a prayer to the Almighty God. May we enjoy this peaceful friendship and the spirit to work together with you for a very long time extending from now to the endless future.

Thank you.

Editors Note
This is the text of a speech, the Quentin Gomez Oration, given by Dr Eddy Rabardjo at the ASEAN Society of Anaesthesiologists in Surabaya, Indonesia on 15 October 2003.

Internal jugular vein catheterisation in infants
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Summary
We have carried out a retrospective study, over a 12 year period, on 520 infants who underwent surgery for congenital heart disease and had catheterisation of the internal jugular vein for the invasive measurement of central venous pressure and the administration of fluids, anaesthetic and vasoactive drugs. The incidence of complications was low. Haematomas were the most frequent complication occurring in 6.9% of the patients. No fatal complications occurred.

Introduction
Percutaneous central vein catheterisation through the internal jugular vein is used during anaesthesia for congenital heart disease and other major surgical procedures in infants and children. The internal jugular vein is the ideal site for monitoring the central venous pressure (CVP) and for the continuous infusion of vasoactive drugs. Other sites used for central venous catheters are the external jugular, femoral and subclavian veins. All of these sites have disadvantages and complications.

Catheterisation of the right internal jugular vein is associated with fewer complications or hazards than the other sites especially in small, breast feeding infants. Technically, central venous cannulation is more difficult in infants and children than in adults. The smaller vessel, the variable position of the internal jugular vein (IJV) with respect to the carotid artery and its close proximity to this vessel are some of the reasons for this difficulty.

Catheterisation of the right internal jugular vein (RIJV) rather than the left is preferable because of the absence of the thoracic duct on the right, its straighter path to the heart and the lower level of the pleural dome on that side. Recent venography studies in infants and
children have showed that the course of the RIJV is relatively constant 2.

The purpose of this report is to describe a large series of internal jugular vein canulations in high risk paediatric patients who underwent a variety of cardiac surgical procedures.

Method

After institutional approval, 520 clinical records of infants who had undergone surgery for congenital heart disease were studied. Central venous catheters were inserted in the right or left internal jugular vein or both using the Seldinger method. Vygon double or triple lumen catheters and single lumen Leadercath catheter were used. Catheterisation was performed after the induction of anaesthesia and nasotracheal intubation.

The technique for insertion of the catheters was as follows.

- The infant was placed in 15-20 degree Trendelenburg position with a small rolled towel placed under the shoulders to distend the vein and hyperextend the neck. The head was rotated 45° to the opposite side.
- The skin was punctured in the apex of the triangle formed by the sternocleidomastoid muscle (high approach).
- The needle was advanced at an angle of 30° to the skin, toward the ipsilateral nipple.
- A flexible guide wire was then inserted through the small needle. The needle was then removed and the catheter passed over the wire (Seldinger technique). A J wire (a guide wire with the tip forming a flexible J) found in the triple or double lumen catheters sets was useful for by-passing obstructions.

Although the cross-sectional area of the internal jugular vein in infants is only about 0.4 cm², multiple lumen catheters have the advantage that one lumen can be dedicated to continuous central venous pressure (CVP) monitoring and the other lumen(s) used to administer fluids and vasoactive drugs.

All data were collected retrospectively from our database and from clinical records in the hospital archives. Data were manually analysed with a pocket calculator.

Results

Five hundred twenty patients ranging in age from 1 week to 1 year, weighing from 2.5 to 8 kg were studied. 63 were neonates with unstable cardiovascular conditions who underwent palliative procedures. The remaining 457 were infants aged 1 month to 1 year.

The catheter most frequently used was the double lumen Vygon (386 patients); triple lumen catheters were used for 39 patients and single lumen catheters for the remaining 95. Five hundred and four catheters were inserted in the right internal jugular vein, 16 in the left and 188 in both veins. Both veins were catheterized in children when peripheral venous access was difficult or they were in a critical condition. The Seldinger technique was used in all patients.

Complications found were haematomas (36 patients, 6.9 %), carotid artery puncture (11 patients, 2%), failure to remove the wire (6 patients, 1.1%), pleural puncture (8 patients, 1.5%) and inability to perform the technique (16 patients, 3%).

Discussion

The right internal jugular vein cannulation was used in infants undergoing cardiovascular surgery to monitor central venous pressure and to infuse fluids and vasoactive drugs. Cannulation of the right internal jugular vein (RIJV) is reported to have a higher success rate with a lower incidence of complications than cannulation of the left internal jugular vein (LIJV). We failed to perform the technique on the right side in a small group of 16 patients (3 %) in whom we then catheterised the LIJV or the femoral vein.

Several manoeuvres and techniques have been described to increase the size of IJV and so improve the success rate of cannulation. The Trendelenburg position is used during internal jugular vein cannulation to distend the vein by increasing in the blood volume in the jugular vessels and thus maximizing the cross-sectional area 11. To perform the Trendelenburg manoeuvre, the operation room was tilted by and angle of 15-20°. The risk of air embolism in hypovolaemic patients is also reduced by this manoeuvre.

Recently we have decided to use the Andropoulos table for the insertion of central venous catheters in paediatric patients and the incidence of transitory cardiac arrhythmias due to atrial wall stimulation by the tip of the catheter has been eliminated 10.

The relative high incidence of carotid artery puncture (2%) in our series is due to our preference of the high approach to the internal jugular vein. The lower approach is not recommended in cardiovascular paediatric surgery because of the possible risk of serious complications, such as massive intrapulmonary haemorrhage after heparinisation.

In conclusion, we have shown that the IJV cannulation is a useful technique in the high risk paediatric patient with a relative low incidence of complications.

References


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Bier Blocks: New Tricks for an Old Dog

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Case Presentation
A healthy 76 kg, 42 year old male was scheduled for right thumb ligament repair and percutaneous pinning of the proximal interphalangeal joint. Surgery was estimated to take one hour. The patient requested Intravenous Regional Anaesthesia (IVRA). Midazolam 2mg and fentanyl 50mcg were given as premedicants. IVRA was administered with 40ml 0.5% lidocaine, ketorolac 10mg, clonidine 100mcg and ketamine 10mg. An upper arm single tourniquet was used. Tourniquet time was 52 minutes at 300 mm Hg. The patient denied any surgical or tourniquet pain. The patient was discharged home 11 minutes after surgery. The patient's pain score remained 0 (0-10 scale) for 16 hours after surgery. Two tablets of Tylenol (Acetaminophen/Paracetamol 650mg and Codeine 60mg) were taken for pain relief in the first 24 hours post-operatively.

This article will review safety considerations and limitation of traditional IVRA. Next, advances in IVRA pharmaceuticals and techniques will be discussed. The article will conclude with a pharmaco-economic discussion and recommendations for future investigations.

Safety Considerations
Although the technique is simple, safety considerations remain paramount. At least seven deaths, two cardio-pulmonary arrests and many seizures have been reported with IVRA. Unintentional leakage of local anaesthetic solution under the inflated tourniquet seems to have been causative in many of these cases. Radiocontrast studies indicate that anaesthetic solution can leak under a correctly inflated tourniquet. Such leakage occurs almost completely via the venous system and demonstrates that venous pressure during injection can exceed tissue pressures under the tourniquet.

Placement of a distal intravenous catheter, exsanguinations of the limb with an Esmarch bandage and a double tourniquet inflated to at least 300 mm Hg minimises the risk of anaesthetic solution escaping into the limb under an inflated tourniquet.

Traditional limitations of the technique.
1. Onset time. With the use of approximately 200mg of 0.5% lidocaine or prilocaine, the time from local anaesthetic injection until surgical anaesthesia is present is typically 10-15 minutes.
2. Tourniquet pain. Nerve ischemia and compression are the main noiceptive stimuli with tourniquet pain. Unmyelinated C fibres appear to be the major neural pathway for transmission of tourniquet pain signals. Tourniquet pain is usually present at 20-25 minutes after tourniquet inflation. Even with double tourniquets, significant pain is typically present at 40 minutes after initial tourniquet inflation.
3. Post-operative analgesia. Because of the rapid reperfusion of the limb after tourniquet deflation, IVRA has typically provided minimal analgesia after surgery. Post-operative analgesia has traditionally been a major advantage of brachial plexus analgesia compared to IVRA.

New pharmacologic adjuvants and techniques
Ketamine. Ketamine profoundly enhances the efficacy of bupivacaine wound infiltration. Because tourniquet pain is transmitted via unmyelinated C fibres, the ability of ketamine to block nociception by antagonism of NMDA receptors has been investigated in the context of IVRA. Ketamine 0.1mg/kg added to IVRA dramatically reduces tourniquet pain and decreases the need for intra-operative opioid supplementation. The degree of post-operative analgesia with the use of ketamine remains to be studied.

Clonidine. Like ketamine, clonidine synergistically interacts with lidocaine in inhibiting C fibres action potentials. Clonidine may also facilitate peripheral mobilisation of endogenous opiates. The addition of clonidine (0.1-0.15 mcg/kg) to IVRA significantly reduces tourniquet pain compared to local anaesthetic alone. Additionally, profound post-operative analgesia was evident for nearly six hours after tourniquet deflation. In comparison with ketamine 0.1 mg/kg, clonidine 0.1 mcg/kg was more effective than placebo but less effective than ketamine in controlling tourniquet pain. No studies have evaluated the combination of ketamine and clonidine as adjuvants to IVRA.

Ketorolac. Ketorolac 60mg added to IVRA results in reduced tourniquet pain and 12-16 hours of post-operative analgesia. These authors later performed a dose-ranging study of ketorolac in IVRA using an upper arm tourniquet and concluded that the benefits of ketorolac incrementally increased up to 20mg; no further benefit was evident with larger doses. When comparing ketorolac in IVRA using a forearm versus upper arm tourniquet, these authors also demonstrated that 10mg ketorolac with a forearm tourniquet IVRA was more effective at providing post-operative analgesia compared to 20mg of ketorolac with an upper arm tourniquet IVRA.

A concern with the use of ketorolac is localised platelet inhibition which could result in wound haematomas. No published study has examined this potential complication.

Neostigmine. In IVRA, Turan and colleagues demonstrated that neostigmine 0.5mg added to prilocaine IVRA decreased block onset time by 60%, increased motor block during surgery, decreased the need for intra-operative opioids and increased the quality of anaesthesia. Neostigmine also prolonged the time until first request for post-operative opioids by 20 minutes. Patients receiving neostigmine had an intra-operative heart rate of approximately 10 bpm less than the control group. Whether this lower heart rate was consequent to muscarinic effects of neostigmine or better pain control was uncertain.

Sodium Bicarbonate. Alkalisation of 0.5% prilocaine very slightly diminished onset time. A similar study with 0.75% prilocaine found no change in onset time but less pain on injection and less intra-operative opioids needs with pH adjusted.
local anaesthetic. Unfortunately, studies involving lidocaine IVRA have been unable to demonstrate any advantage to alkalisation.

Opioids. Fentanyl, sufentanil, meperidine (Pethidine) and morphine have all been studied as adjuvants for IVRA. Overall the results have been conflicting as far as the ability of opioids used in IVRA shortening block onset time or potentiating intra-operative analgesia. After tourniquet deflation, nausea, vomiting and dizziness have all been reported when opioids are added to IVRA.

Muscle relaxants. Most studies of adding relaxants (pancuronium, atracurium, mivacurium) to IVRA were supportive with improved operating conditions in situations where motor block is advantageous such as fracture reduction or tendon repair. Patients consistently have delayed return of extremity muscle strength after release of the tourniquet. Atracurium 0.03 mg/kg (approximately 2mg in a 70 kg adult) has been recommended when motor blockade is deemed essential.

Long-acting local anaesthetics. Several groups have investigated performing IVRA with levo-bupivacaine or ropivacaine. Results have consistently demonstrated slower onset times compared with lidocaine or prilocaine. Duration of post-operative analgesia has been increased with l-bupivacaine or ropivacaine but to a much lesser degree compared to clonidine or ketorolac. In the author’s opinion, the modest post-operative analgesia provided by these long-acting local anaesthetics does not compensate for the slow onset times of higher toxicity risks incurred.

Forearm tourniquet (versus upper arm). Use of a forearm tourniquet may be an option for some distal upper extremity procedures. Several advantages are evident. Forearm tourniquet pain is delayed in onset and of lesser severity compared to upper arm tourniquet. Approximately 50% less local anaesthetic solution can be used when a forearm tourniquet is chosen which should lower toxicity risks. 10mg ketorolac used in a forearm tourniquet IVRA provided longer post-operative analgesia compared to ketorolac 20mg used with an upper arm tourniquet IVRA. Finally, concerns regarding increased risk of nerve injury or poor tourniquet function with a forearm tourniquet have not been substantiated in any study.

Pharmaco-economic studies. IVRA and axillary block both reduced post-operative pain and decreased anti-emetic medication usage compared to general anaesthesia. IVRA was the most time- and expense-efficient, with shorter operating room times, faster discharge, lower pharmaceutical costs and least post-operative nursing care requirements.

Conclusion: IVRA is a safe, technically easy and highly time-efficient method of anaesthesia. Traditional limitations of the technique included slow block onset, tourniquet pain, limited post-operative analgesia and concerns about local anaesthetic toxicity. Each of these concerns has been mitigated with pharmacologic adjuncts and improved technique. Neostigmine greatly speeds block onset time. Clonidine, ketorolac, ketamine and neostigmine all substantially reduce tourniquet pain. Clonidine and ketamine especially provide prolonged post-operative analgesia.

Procedural modifications have also improved IVRA safety and efficiency. Use of a distal intravenous catheter, injection of the local anaesthetic over >90 seconds, the use of an Esmarch bandage and of tourniquet pressures of at least 300 mm Hg with a double lumen tourniquet have all been shown to prevent sub-tourniquet venous leakage of anaesthetic solution.

Future areas of research include dose response studies to define the optimal dose of the adjuvants. Also, synergy likely exists when these agents are co-administered, so clinical studies defining optimal drug combinations would be clinically beneficial.

Useful IVRA Pharmacologic Adjuvants

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<tr>
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<tr>
<td>Ketamine</td>
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<tr>
<td>Ketorolac</td>
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<tr>
<td>Clonidine</td>
<td>50-100mcg</td>
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<tr>
<td>Neostigmine</td>
<td>0.5mg</td>
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In the previous article I proposed an inhalation anaesthesia machine suitable for any country in the world, whether rich or poor. Many people – including all those who work in the International Development Departments of every Government in the EU - will say that in an epidemic of famine, AIDS, war and corrupt government, who needs anaesthesia? I say: we should carry on supporting the services of surgery and anaesthesia, regardless of the chaos we may find in any particular place. Indeed, during such bad times, they are needed more than ever. Clinical services can function after their own fashion and can be provided at a fraction of the cost of an EU or DFID health development report. It is largely to protect the interests of the latter organisations that no one has ever done a comparative cost-benefit analysis.

The machine uses the novel concept of a circle system supplied by oxygen from a portable electric concentrator and a facility to allow ventilation with room air in case of oxygen supply failure for any reason. A nurse or paramedical anaesthetist should be able to use it as easily as a specialist, without necessarily having to understand how a circle system works.

Three modifications to the breathing system are needed to make it simpler to use and allow for oxygen failure:

- An inflating balloon valve located in the expiratory limb of the circle
- An air inlet valve
- A bellows to hand ventilate (Mk I) or an automatic ventilator (Mk II) that also allows manual ventilation.
Referring to the figure, during spontaneous breathing, the patient moves the gas around the system in the same manner as in a conventional circle breathing system. Fresh gas (oxygen from the concentrator [1] and volatile agent from the plenum vaporiser [2]) is added at 1-5 litres/minute. The day-glow coloured reservoir bag [3] is visible but out of reach on the back bar and moves with respiration as usual. The bellows [4] also moves a little as in a draw-over system.

As with draw over, the anaesthetist operates the bellows to hand ventilate.

The ‘pop-off’ or positive pressure relief valve (PPRV [5]) which in a conventional circle system has to be partially closed to enable inflation of the chest is fixed wide open and out of reach in this system. The gas from the bellows would therefore tend to go on round and out, following the path of least resistance, and not go to the patient.

The occurrence of squeezing a bag or bellows and not feeling the elasticity, and seeing the inflation of the lungs can be likened to driving down a steep hill in a car with the brake pedal ineffectually pressed to the floor.

This alarming event does not happen because of the balloon inflating valve [6]. During a positive pressure inflation of the lungs, the same pressure is directed via a small pipe [7] from the bellows which inflates the balloon in the lumen of the expiratory limb. The balloon obstructs flow in this limb and gas is directed to the patient. Clearly, the pressure in the balloon is the same as outside in the lumen and so one might expect that some gas would get past it, even making a rude noise in the process, but the dome of the balloon abuts against an annular ring [8] and forms a seal. As one pushes harder on the bellows, the balloon abuts harder on the ring and the seal actually improves.

When the inflating pressure is released, the small amount of gas in the balloon is pushed back out by the higher pressure in the patient’s airway; it collapses and the patient’s exhaled gas passes the flattened balloon towards the soda lime canister [9] and reservoir bag. A light spring in the PPRV keeps the bag distended. Unlike all contemporary inflating valves, such as Ambu and Laerdal, which would jam if used in this way, the balloon cannot get jammed in the forward position because the patient’s airway pressure will always exceed balloon pressure and collapse it.

The automatic action of the balloon allows the patient to breathe spontaneously or enables assisted ventilation without the anaesthetist having to do more than push on the bellows. Except for the longer time required to reach high concentrations of anaesthetic agent, the blindfolded user cannot distinguish this system from a draw-over system.

The system gas comprises oxygen, nitrogen, argon and water vapour in varying concentrations. The oxygen percentage varies between 95% initially, 50% immediately after connecting the patient and about 70-75% after 15-30 minutes of nitrogen washout. If the fresh gas flow is increased to 5 litres per minute, the oxygen content from the concentrator falls to about 75%. Thus high flows of pure oxygen, such as normally used at the beginning and end of anaesthesia, cannot be given. This is an unavoidable feature of any system that uses a portable oxygen concentrator with limited output.

If the zeolite in the concentrator is not replaced (a common situation in resource-poor countries) the oxygen purity falls. After about 7-10 years of neglect in average service, a well-made, WHO spec machine may provide only 70% pure oxygen at 2 litres flow. This does not mean the machine cannot be used, but the user should be aware of the reduction. Other drawbacks are a greater requirement for gas monitoring than needed for a draw-over system and the soda lime has to be changed.

If the gas flow stops completely – for example in a power cut or if the concentrator has a fault - the air inlet valve [10] opens. The patient will breathe room air and start to wake up. Either some form of TIVA must be available or, if power cuts are a common event, one can incorporate a crude draw-over vaporiser [11] of the Goldman type for emergencies. The anaesthetist can still ventilate since the balloon valve operation is independent of gas flow.

The configuration above can be made on the spot in a hospital workshop in a developing country using components such as donated plenum vaporisers and breathing circuits which otherwise lie around gathering dust. Any balloon of the right dimensions will do but a latex-free, thick walled design is best.

The design is cheap to make and it works but no one will ever buy it in the market place: if you succeeded in finding the draw-over exhibit at Medica Düsseldorf (in Part I), this one would be languishing next door.

“What’s that?” “Oh, that’s for developing countries” and the visitor moves on.

It’s the bellows that is unacceptable. So, the most important component of this system is to have a ventilator to replace the bellows and in the final article I will present what I hope is a novel way of ventilating a patient using some familiar components to make an anaesthesia machine that a salesman might describe as……………sexy.
Critical Illness and its Impact on the Aboriginal People of Top End of the Northern Territory of Australia

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Introduction
Darwin is in the tropical north of Australia. The Royal Darwin Hospital (ROH) intensive care unit (ICU) is the only one in the “Top End” of the Northern Territory and serves a population of 150,000 in an area of more than 500,000 km2 with 6,200 km of coastline. The Northern Territory contains 1% of Australia’s population but 13% of the Aboriginal population. Aboriginal people comprise 28% of the population of the Top End, many of whom live in small remote communities. Some communities are only accessible by air and many more are inaccessible by road for six months of the year during the wet season. Critical illness in the Aboriginal population has not been previously described. The primary health status, geographic isolation and culture of the Aboriginal population contribute to a unique pattern of critical illness which requires understanding in order to provide appropriate care for this important section of our community.

A recent report concluded that Aboriginal people are the most disadvantaged group in Australia. In a number of communities Aboriginal people do not have access to safe water, housing, power, roads or sewerage. The health statistics for Aboriginal people are the worst of any group in Australia, including groups of similar socio-economic status and non-English speaking migrant populations and worse than those of comparable indigenous populations overseas. Aboriginal people have a lower life expectancy than indigenous groups in other countries such as the New Zealand Maoris and the North American Indians and a much lower life expectancy than non-Aboriginal Australians.

Health to Aboriginal people involves all aspects of their life including control of their physical environment, dignity, community self-esteem and justice. It is not merely a matter of the provision of doctors, hospitals and medicines or the absence of disease and incapacity. Aboriginal people have a holistic view of health that relates to a healthy and productive lifestyle not just the absence of disease.

Health Status of the Aboriginal Population of the Top End
The health status of the Aboriginal people influences their presentation with critical illness. The incidence of diabetes in Aboriginal people is 20% compared to 4% in the non-Aboriginal people and it occurs at an earlier age. Aboriginal people have a rate of end-stage renal disease that is 14 times that in the non-Aboriginal population (756/million/year compared to 54/million/year). There is also a high incidence of hazardous alcohol use and smoking. The highest incidence of acute rheumatic fever in the world is in Aboriginal people living in the Top End with two to seven cases for every 1000 children aged five to 14 years. The prevalence of rheumatic fever in Aboriginal children is 14 times that in non-Aboriginal children (0.2% compared to 0.014%). The rate of tuberculosis notification in Aboriginal people is 16 times that of non-Aboriginal people (13.1/100,000 compared to 1.2/100,000). Life expectancy of Aboriginal males in the Northern Territory is 56.3 years compared to 76.2 for other Australian males. Life expectancy of Aboriginal females in the Northern Territory is 61.4 compared to 82.8 years for other Australian females. The infant mortality of Aboriginal children in the Northern Territory is 19/1000 live births compared to 7/1000 live births for non-Aboriginal children.

Access to Intensive care Facilities
The ROH ICU is the only Level 3 unit for more than 2,500 km in every direction. The Top End has two regional hospitals at Katherine and Gove. The rest of the rural area is reliant on local health clinics for all health care needs. There are relatively few remote community clinics staffed by resident doctors. The Aerial Medical Service provides visiting medical staff to those communities without doctors. The clinics are mostly staffed by remote area nurses and Aboriginal health care workers. Katherine and Gove hospitals are staffed by senior residents and rural general practice trained doctors. They have facilities to stabilise critically ill patients and send them to Darwin. ROH offers telephone support and advice and can send specialist retrieval team if required. This may mean that critically ill patients are cared for by remote area nurses whilst the retrieval plane is mobilised. The remote area nurses are generally quite skilled. The clinics may be required to care for critically ill patients for a number of hours in less than ideal circumstances. The Aerial Medical Service transports the critically ill patient from remote communities to the nearest hospital. The remote and rural areas are divided into three regions. In the Darwin region, critically ill patients are taken directly to RDH. In the Gove and Katherine regions, critically ill patients are taken to the regional hospital, stabilised and then transferred to Darwin. The distances involved result in a delay in definitive treatment for many critically ill Aboriginal people which adds to their severity of illness on admission.

The majority of ill Aboriginal patients are admitted form remote communities.


<table>
<thead>
<tr>
<th></th>
<th>Aboriginal</th>
<th>Non-Aboriginal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote Communities</td>
<td>267 (67%)</td>
<td>55 (11%)</td>
</tr>
<tr>
<td>Katherine and Gove</td>
<td>22 (5%)</td>
<td>27 (5%)</td>
</tr>
<tr>
<td>Darwin</td>
<td>116 (29%)</td>
<td>425 (84%)</td>
</tr>
</tbody>
</table>

Aboriginal People and Critical Illness
Aboriginal people make up 28% of the population of the Top End of the Northern Territory and 45% of the intensive care unit admissions. Critically ill Aboriginal patients are, on average, eight years younger than non-Aboriginal patients.

Average Age of ICU Patients (Jan 1999-June 2002)

<table>
<thead>
<tr>
<th></th>
<th>Aboriginal</th>
<th>Non-Aboriginal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survived</td>
<td>40</td>
<td>46</td>
</tr>
<tr>
<td>Died</td>
<td>45</td>
<td>56</td>
</tr>
<tr>
<td>All</td>
<td>40</td>
<td>48</td>
</tr>
</tbody>
</table>
Despite being young, the Aboriginal patients have more co-morbidity than non-Aboriginal patients. Their chronic health status reflects the poor living conditions and inadequate primary health care in the remote communities.

### Co-morbidities of ICU patients (2000)

<table>
<thead>
<tr>
<th></th>
<th>Aboriginal (n=195)</th>
<th>Percentage</th>
<th>Non-Aboriginal (n=271)</th>
<th>Percentage</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPD</td>
<td>30</td>
<td>15%</td>
<td>22</td>
<td>8%</td>
<td>0.21</td>
</tr>
<tr>
<td>Non-insulin dependant diabetes</td>
<td>39</td>
<td>20%</td>
<td>20</td>
<td>7%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Harmful alcohol use</td>
<td>44</td>
<td>23%</td>
<td>24</td>
<td>9%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>End stage renal failure</td>
<td>17</td>
<td>9%</td>
<td>5</td>
<td>2%</td>
<td>0.002</td>
</tr>
<tr>
<td>Chronic renal impairment</td>
<td>13</td>
<td>7%</td>
<td>6</td>
<td>2%</td>
<td>0.031</td>
</tr>
<tr>
<td>Hypertension</td>
<td>39</td>
<td>20%</td>
<td>45</td>
<td>17%</td>
<td>0.413</td>
</tr>
<tr>
<td>Cardiac Disease</td>
<td>53</td>
<td>27%</td>
<td>66</td>
<td>24%</td>
<td>0.56</td>
</tr>
<tr>
<td>Smoking</td>
<td>38</td>
<td>20%</td>
<td>44</td>
<td>16%</td>
<td>0.43</td>
</tr>
</tbody>
</table>

The most frequent diagnoses on admission for critically ill Aboriginal patients are sepsis, septic shock, trauma and pneumonia. The pattern of admission diagnosis is different in non-Aboriginal patients.

### Admission Diagnosis (Jan 1999-June 2002)

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Aboriginal (n=688)</th>
<th>Percentage</th>
<th>Non-Aboriginal (n=827)</th>
<th>Percentage</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sepsis/septic shock</td>
<td>162 (24%)</td>
<td>123 (15%)</td>
<td>123 (15%)</td>
<td>24%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Head injury/multiple trauma</td>
<td>95 (14%)</td>
<td>148 (18%)</td>
<td>148 (18%)</td>
<td>18%</td>
<td>0.03</td>
</tr>
<tr>
<td>Respiratory infection</td>
<td>43 (6%)</td>
<td>47 (6%)</td>
<td>47 (6%)</td>
<td>6%</td>
<td>0.6</td>
</tr>
<tr>
<td>Intra-cranial bleed</td>
<td>41 (6%)</td>
<td>37 (4%)</td>
<td>37 (4%)</td>
<td>4%</td>
<td>0.2</td>
</tr>
<tr>
<td>CCF/cardiogenic shock</td>
<td>38 (6%)</td>
<td>39 (5%)</td>
<td>39 (5%)</td>
<td>5%</td>
<td>0.5</td>
</tr>
<tr>
<td>Post-cardiac arrest</td>
<td>31 (4%)</td>
<td>25 (3%)</td>
<td>25 (3%)</td>
<td>3%</td>
<td>0.13</td>
</tr>
<tr>
<td>COPD</td>
<td>29 (4%)</td>
<td>21 (3%)</td>
<td>21 (3%)</td>
<td>3%</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Aboriginal patients have a higher severity of illness (APACHE 2) score at presentation than non-Aboriginal patients which is related to both their chronic health status and their acute illness. It is interesting to note that despite a higher incidence of significant co-morbidities and higher admission severity of illness score, there is no evident increase in hospital morbidity. The average hospital survival of Aboriginal ICU patients from 1999 to 2002 was 80.2% compared to 82.4% for non-Aboriginal ICU patients.

### Severity of Illness and Survival (Jan 1999-June 2002)

<table>
<thead>
<tr>
<th></th>
<th>APACHE 2 score</th>
<th>Expected mortality</th>
<th>Actual mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>All patients</td>
<td>19.02</td>
<td>38%</td>
<td>18.6%</td>
</tr>
<tr>
<td>Aboriginal (n=688)</td>
<td>20.30</td>
<td>43%</td>
<td>19.8%</td>
</tr>
<tr>
<td>Non-Aboriginal (n=827)</td>
<td>17.93</td>
<td>34%</td>
<td>17.5%</td>
</tr>
</tbody>
</table>

### Impact of Critical Illness on Aboriginal People

Many of the Aboriginal patients and their families have rarely, if ever, been to Darwin. Their world comprises the community in which they live and the surrounding country. Darwin is considered a long way away and a foreign place. RDH is where you go if you are very unwell and are at risk of dying. Each community has a collective memory of critically ill community members who died in RDH. There is great fear associated with the transfer of patients to RDH and it can, at time, be difficult for the family and the community to choose the right person to escort the patient to Darwin.

When confronted by the spectre of ICU, families are often terrified and confused. Some Aboriginal people have never been in an elevator so the even basic transport up and down the building is bewildering. Even simple explanations are outside their world-view. There is a perception that because the family member will not wake up, cannot talk and cannot eat they are dead and the ICU staff may not be telling true story when they say that the patient is stable. The ICU has a reputation that in some communities as that place in the sky where you go to die (currently ICU is on the seventh floor of an eight-story building). Often families recall someone else from the community who went to ICU and died there.

Families worry about where they will sleep, how will they get food or that they will be asked to make decisions for which they have no authority to make. The issue of consent in Aboriginal families is quite different for the approach in Western culture. Aboriginal families consult widely before making a decision lead by the elders of the family. A mother does not make decisions for her child on her own — the whole family are involved and often permission to sign a consent form must be obtained from a senior family member or members back in the community. There is great significance attached to giving consent for a procedure and if the correct person in an Aboriginal way is not involved in the decision, the person giving consent may be held responsible for the subsequent events.

One of the other important differences for the Aboriginal patients is the contrast between lifestyle in the community and the lifestyle imposed by the hospital system. Aboriginal patients often feel claustrophobic and oppressed by being enclosed with the four walls of the hospital. The therapeutic environment of air-conditions, sterile wards suits patients from Western cultures but it is entirely inappropriate for the holistic care of Aboriginal patients. The ICU staff find that taking ventilated awake patients outdoors makes a dramatic difference to their outlook. The words “outside” or “downstairs” become a mantra for out recovering Aboriginal patients. In many ways the design of the hospital environment has overlooked the needs of the largest sector of patients in RDH although current redevelopment with large garden areas for patients and families should address some of these issues.

### Aboriginal Patients and Death in the ICU

Critically ill Aboriginal patients in Darwin are separated from land, community, family and friends. It is difficult to arrange for patients to receive traditional rites as location plays an important part in the process. Aboriginal people have a very strong connection to the land, their country, and to die away from that country results in great sadness for the patient, their family and the community. When further medical therapy has become futile and the end is inevitable, the final wish of many of our Aboriginal patients and their families is to go home to die. Home is often a small remote community and transport by the Aerial Medical Service is required. In the unstable, critically ill on complex supportive therapy, this is often not possible. Occasionally it is possible and provides great comfort to the patient, the family and the community.

It is important to allow time for families and communities to come to Darwin to be with a relative who is likely to die despite medical intervention. It is often expensive and difficult to arrange for people to come from remote...
Research/Investigations

Does the addition of Pethidine to lidocaine prolong the post-operative analgesia in spinal anaesthesia for Caesarean section?

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Summary
A total of 40 patients scheduled for caesarean section, both elective and emergency, were selected for a prospective, comparative study on post-operative analgesia. Lidocaine with pethidine (meperidine) 10mg was compared with lidocaine alone as the anaesthetic agent over a period of three month. The addition of pethidine to lidocaine doubled the duration of post-operative analgesia. Unfortunately the analgesia did not last long enough to totally avoid the use of intramuscular pethidine post-operatively.

Introduction
Providing post-operative analgesia for women after caesarean section is an integral part of the anaesthetist’s duty.
Does the addition of Pethidine to lidocaine prolong the post-operative analgesia in spinal anaesthesia for Caesarean section? continued

Lilongwe Central Hospital is the second largest hospital in Malawi and we feel it should act as an example to the district hospitals. As in other hospitals in Malawi, caesarean section is the most commonly performed operation. We saw that many women were left in pain after caesarean section and that the nurses seemed hesitant or unable to give adequate analgesia to them to alleviate this suffering. If a technique could be developed that used long acting analgesics in theatre that had minimal side-effects for the mother and baby, it would help solve this problem.

Traditionally in Malawi, lidocaine is used as the sole spinal agent for caesarean section. It provides very little useful post-operative analgesia. We therefore investigated whether the addition of pethidine 10mg would usefully prolong the post-operative analgesia. Our pharmacist confirmed that our usual pethidine was preservative-free and therefore suitable for intrathecal use.

Method

After obtaining the approval of the departmental ethics committee, and with patient consent, forty patients, in two groups, were entered in the study. They were randomly assigned to one of two groups. In Group A, twenty patients received lidocaine 1mg/kg intrathecally. In Group B, pethidine 10mg was added to the lidocaine.

The extent of the block was determined using a cold pack. If the patient’s systolic blood pressure fell below 90mm Hg, intravenous ephedrine and fluids were administered.

The age of the patients ranged from 15 to 35 years. Patients who had been in labour for greater than 12 hours, in whom there was evidence of severe foetal distress or who had suffered an ante-partum haemorrhage were excluded from the study.

Results

Fig 1. Patient details

<table>
<thead>
<tr>
<th></th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Age</td>
<td>15-35</td>
<td>15-35</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lidocaine Dose</td>
<td>65mg (50-75)</td>
<td>70mg (50-75)</td>
</tr>
</tbody>
</table>

Fig 2. Intra-operative complications

<table>
<thead>
<tr>
<th></th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory Depression</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Dyspnoea</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Hypotension</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Block below T10</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Two patients in Group A, both of whom had high blocks, developed respiratory depression. In Group B, one of the patients with respiratory depression had a high block; the other four did not. All had their respiration assisted with a face mask.

Hypotension was treated with ephedrine and fluids.

Fig 3. Post-operative complications

<table>
<thead>
<tr>
<th></th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nausea</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Vomiting</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Spinal headache</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

There was no difference in Apgar scores between the two groups at 1 and 5 minutes.

Fig 4. Post-operative analgesia

<table>
<thead>
<tr>
<th></th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of Motor Block</td>
<td>90mins</td>
<td>120mins</td>
</tr>
<tr>
<td>Duration of Sensory Block</td>
<td>70mins</td>
<td>210mins</td>
</tr>
<tr>
<td>Duration of Analgesia</td>
<td>70mins</td>
<td>210mins</td>
</tr>
</tbody>
</table>

Discussion

Our standard agent for spinal anaesthesia is hyperbaric lidocaine 5% in dextrose 7.5%. It has a short duration of action, typically 50-60 minutes. Pethidine is the only opioid that is available on the standard drug list in Malawi and hence the only agent we could use to attempt to prolong analgesia after spinal anaesthesia.

Kafle(1) compared intrathecal pethidine alone (1mg/kg) with 5% hyperbaric lidocaine 1.2 to 1.4ml in fifty women undergoing caesarean section in Nepal and found that surgical anaesthesia was adequate in both groups but that the mean duration of post-operative analgesia in the lidocaine group was one hour and it was six hours in the pethidine group. He noted that the incidence of hypotension was higher in the lidocaine group but that of drowsiness and pruritis was greater in the pethidine group. He concluded that pethidine 1mg/kg was superior to 5% lidocaine because of the prolonged post-operative analgesia.

Other authors have compared spinal pethidine and lidocaine for post-partum tubal ligation, day case knee arthroscopy and endoscopic urological procedures including prostatic resection and have reported that pethidine is, at least, comparable to lidocaine and is, in many cases superior.

The incidence of complications has varied in these studies. Generally, pethidine produces less hypotension and less motor block (this may or may not be an advantage), but tends to be associated with more drowsiness and pruritis. Respiratory depression has very rarely been reported and this is thought to be because pethidine binds readily to opiate receptors in the spinal cord and has an intrinsic local anaesthetic action.

Conclusion

We have shown that the addition of pethidine to lidocaine for caesarean section results in a useful prolongation of post-operative analgesia without an unacceptable increase in side-effects. Post-operative analgesia might be further prolonged if oral analgesia were given before pain returned.

As pethidine is the only analgesic available in much of Africa, is cheap and is generally preservative-free, it merits further investigation as an agent for spinal anaesthesia, either alone or combined with lidocaine.

References


Editorial Note

This paper won first prize in the Free Paper Competition at the International Refresher Course for Clinical Officers held in Malawi in June 2003.
News from around the world

Sierra Leone Nurse Anaesthetists

Final Examinations July 2003

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The thought of visiting Freetown, Sierra Leone in the rainy season may not appeal to everyone. However, the invitation from Dr Eric Vreede to examine the latest nurse anaesthetist trainees for their final examinations was a chance that I did not want to miss. Dr Eric Vreede has been working in Sierra Leone since 1999 and over the last three years has developed a training programme for nurse anaesthetists. His aim was to train nurses to provide safe anaesthesia in a country where, for many years, Dr Vreede was the only medically qualified anaesthetist. With five local nurse anaesthetists, he provided anaesthesia for a population of 4.4 million. Since the start of his training programme, nine more nurses have been trained and I was to act as the external examiner for the latest three who have completed the training programme.

The trainee nurse anaesthetist is generally an experienced nurse in either midwifery or clinic/hospital-based nursing. The first nine trainees were taught safe anaesthetic practice in a two year programme that was funded by UNFPA (United Nations Fund for Population Activities) and the trainees gained a qualification recognised by the National Board of Nursing in Sierra Leone. The latest three trainees have been trained in a surgical hospital in Goderich on the outskirts of Freetown run by Emergency (an Italian aid organisation). The training of this last group of students was different from the original trainees as this latest course was very practically based when it started in December 2001 with the trainees learning from a series of three expatriate doctors who worked for Emergency for up to six months at a time. Towards the end of 2002 it was apparent that these students knew little of the theoretical background to anaesthesia and in January 2003 Eric started work with them to bring them up to the standard of his previous group so they could be recognised as qualified nurse anaesthetists by the Board of Nursing. This has involved much hard work and long hours for both trainees and trainer to cover a syllabus that is similar to the old Diploma of Anaesthesia of the Royal College of Anaesthetists here in UK. The emphasis of the training has been safety but also teamwork with the trainees encouraged to learn from each others clinical experiences.

For one day a week the trainees were based in a classroom and taught basic anatomy, physiology, pharmacology and physics. This knowledge was reinforced and extended in theatre for the rest of the week where typically the trainees did three to four cases a day and took part in the on call rota. The case mix covered general surgical cases (including laparotomies, thyroidectomies, mastectomies, hernia repairs and trauma) as well as orthopaedics and burns in both adults and children down to the age of one year. The Emergency hospital in Goderich does not provide an obstetric service and so for this part of their training the nurses spent time at the main gynaecology and obstetric hospital (PCM/M) in Freetown. In addition, the trainees were encouraged to participate in audit and this group completed a project examining the incidence of nausea and vomiting following ketamine anaesthesia.

For their final examination the trainee nurse anaesthetists were required to sit a four hour written paper (15 compulsory questions), present a clinical case including a discussion of their anaesthetic management and a viva voce that lasted 20 minutes. The exam was designed to assess understanding of general and regional anaesthetic techniques and the identification of the problems associated with typical cases encountered in daily practice to ensure delivery of safe anaesthesia. After the two days of the examination, I was very impressed with the trainees’ knowledge and their practical ability to deliver a good anaesthetic safely. All three candidates passed. At the ceremony to award certificates for their anaesthetic training, Dr Vreede took the opportunity to encourage his last group of students to continue learning and developing their anaesthetic practice from each other, from other nurse anaesthetists in the country at their monthly meetings of SLANA (Sierra Leone Association of Nurse Anaesthetists) and from expatriate anaesthetists when they come to work with Emergency. At the present time there is still only one medically qualified anaesthetist in the country and, whilst inroads have been made to train nurse anaesthetists by Dr Vreede, the Department of Health in Sierra Leone is unable to make funding the continuing training of nurse anaesthetists a priority. I can only hope that, with continuing peace in the country, this situation will improve.

I would like to thank both World Anaesthesia and the World Federation of Societies of Anaesthesiologists for their generous donations towards the cost of the flight to Sierra Leone.
S

Somalia is a country situated on the Horn of Africa. It occupies an important geopolitical position between sub-Saharan Africa and the countries of Arabia and south-western Asia. With an area of about 246,000 square miles (637,000 square kilometres), it is bounded on the north by the Gulf of Aden and on the east by the Indian Ocean; its western border is bounded by Kenya and Ethiopia and, to the northwest is Djibouti. The capital is Mogadishu. The population is 7 million and over 99% of the people are Muslim. The official language is Somali but many people speak Arabic, Italian and local languages. Traditionally the economy has been based on livestock and hides, banana producing and fishery. Somalia has a tropical but not torrid climate and there is little seasonal change in temperature. In the low areas the average temperature ranges from about 24°C to 31°C (76°F-88°F). In the plateau region, it is cooler; in the southwest warmer. Periodic winds, the southwest monsoon (June to September) and the northeast monsoon (December to March) influence temperature and rainfall. Rain falls in two seasons of the year: heavy rains from March to May and light rains from September to December. Average rainfall is estimated at 11 inches but it is irregular and droughts are frequent.

Puntland State

Puntland State was founded in 1998 in an attempt to bring a single administration and local government to the whole of the North East of Somalia. This was after the breakdown of law and order when the country was run by competing war lords, the failures of numerous Somali reconciliation conferences and the disastrous UN mission to Somalia, which ended in the deaths of American and UN soldiers and was subsequently the subject of the film “Black Hawk Down.”

The people of the Northeast are a single clan and chose to create a federal state, which would best meet their local priorities while still championing the cause of a unified Federal Somali Republic rather than declare independence as the neighbouring state now known as Somaliland has done. Puntland’s local administration tries to restore the rule of law, collect taxes, encourage the establishment of development projects and supports the work of local and international NGO’s.

Puntland has enjoyed unrivalled peace and is developing faster than any other regional entity in the former Somali republic. The state capital is Garowe and the largest city is Bossaso, an important commercial port. The second largest city is southern Puntland is Galkayo located in the centre of the country near the Ethiopian border and with a population is around 250,000. Even before the war, Galkayo was neglected by the various administrations that ruled the country and prior to the outbreak of general hostility it was considered a barren, desolate, rebel town with very little infrastructure. The anarchic war destroyed what little infrastructure Galkayo had and it was not until 1993 at the end of hostilities that life slowly returned to normal in the city.

Galkayo 2003 can only be called a miracle. It is the fastest growing town in Somalia and is a hub of dynamic commercial activity which connects the whole of the Somali country and people. Because of its location, relative stability and the success of the Puntland administration it has attracted businesses from as far as Somaliland, Mogadishu and the Somali region in neighbouring Ethiopia.

“On an evening stroll through its crowded streets, you find teashops and restaurants full, shops open, workshops brimming with bustle and noise. Houses are being built. You see no guns, no shattered buildings and, while people are clearly poor, no one is begging. Moreover, you can actually see Galkayo has streetlights, the only town in Somalia to have them.” The Economist magazine UK, 1998.

Health

The health system was devastated by the ten-year civil war and the Ministry of Health and Sanitation lacks the financial resources and infrastructure to deliver adequate health services to the population. The infant mortality rate is 132/1000. Diarrhoeal diseases, respiratory infections and malaria, account for more than one half of all child deaths. Neonatal tetanus and other birth-related problems also contribute significantly to infant mortality, while measles and its complications result in many deaths during outbreaks. Recent surveys have shown that immunisation uptake has fallen from 75% before the war to less than 30 per cent. The children’s susceptibility to infectious diseases is increased by their poor nutritional status.

Maternal mortality is estimated to be the third highest in the world, 1600/100,000. The immediate causes are haemorrhage, eclampsia, infection and
anaemia, compounded by the effects of female genital mutilation (infibulation), a practice which is virtually universal. The situation is further aggravated by maternal anaemia, the limited numbers of trained midwives and the absence of a referral services for emergency obstetric care.

Ten women between the ages of fifteen and forty five die everyday in Somalia as a result of pregnancy related complications and every year in Somalia up to 110,000 pregnancies result in complications, illness or permanent disability for the mother or child.

Galkayo

In Galkayo, a general community hospital, with a capacity of 120 beds, provides treatment for the local community and acts as a referral hospital for several regions in the north-east of Somalia. This hospital is supported by the Italian Red Cross and MSF Holland but is in poor condition and lacks many basic facilities.

It is estimated around 500,000 are dependant on Galkayo for their health care needs, and people come from as far as areas in Ethiopia, Mogadishu and Las Anod, which are over 500km away.

COMSED is a non-profit and non-governmental organization registered in Italy and in Somalia. It works in the health sector and it is devoted to the provision of medical services to the Somali community. COMSED established and runs the Galkayo Medical Centre (GMC), a non-profit NGO medical facility. After five years of operating a day hospital (outpatients) and assessing the health situation in the region, COMSED has also recently opened a new Maternity and Paediatric Wing of the GMC. Dr Abdul M. Giama, President of COMSED and GMC visits Galkayo 4 times per year with a team of Italian volunteer doctors from different specialties to provide medical and surgical care.

GMC activities, which are gender sensitive, include:

a) A maternity and paediatric hospital, a day hospital and a surgical wing.
b) General diagnostic, medical and surgical treatment.
c) Pre- and post-natal clinic and treatment of infertility
d) A laboratory for normal diagnosis and pre-surgery HIV/AIDS tests
e) Preventive medicine

GMC has most of the medical equipments it requires to provide these services but lacks adequate anaesthetic and intensive care equipment. In desperate situations, we have turned to traditional healers in order to relieve pain. No hospital, especially one proving gender sensitive services, cannot be complete without proper anaesthetics and intensive care units, particularly when it carries out over one hundred operations per month and 80% of the case load is obstetric or gynaecological.

The electrical and water supply to the hospital are regular and reliable. We have a back-up generator and a well connected to the hospital electrical and water supply. There is however, no regular supply of oxygen or any other gases.

Most patients requiring anaesthesia receive a combination of Ketamine and Diazepam with added oxygen when it is available. They are allowed to breathe spontaneously. Although generally adequate for our needs, this form of anaesthesia is unsatisfactory and potentially unsafe for emergency surgery.

Conclusion

The provision of one complete Glostavent anaesthetic machine would be a major contribution to improving and expanding the GMC medical facilities and services for the people of the region particularly for women and children. It would also almost certainly lead to a reduction of surgery related mortality and morbidity.

GMC and its management would be most grateful to generous donors of this equipment and it undertakes to be transparent and accountable, reporting to the donors on the use of the equipments.

Further Information

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Via Verdigne, 20
88074 Crotone, Italy
Email: kadir2@libero.it

London Branch
121 High St
Acton W3 6LY
Email: said@doctors.org.uk
Galkayo Medical Centre
Galkayo,
Puntland
Somalia

Cambodia

Cambodia is situated in South East Asia, bordered by Thailand, Laos and Vietnam. It covers an area three quarters the size of the United Kingdom and has a population of 12 million.

Eighty percent of Cambodians are Khmer people whose independent kingdom existed until the middle of the 19th century when it became under French domination.

The French ruled Cambodia from 1863 until 1953, apart from five years during World War II when the Japanese occupied the country, when it again became independent.

During the Vietnam War (1957-75), Cambodia tried to remain neutral but fighting between US troops and the Vietnamese communists split across the border. Years of civil war resulted until the Khmer Rouge, a political party led by Pol Pot gained power in 1975. His brutal dictatorship introduced a policy of genocide of the educated people, the destruction of all institutions and a radical agricultural revolution that forced all town dwellers to leave their homes and move to the country. During this period, portrayed in the film “The Killing Fields” 3 million people died of hunger disease or were murdered.

In 1978 Vietnam invaded Cambodia and attempted to overthrow the Khmer Rouge government but a state of continuous guerrilla war existed for the next 12 years. In 1991, Pol Pot finally fled to Thailand, elections organised by the UN were held and the monarchy restored. Cambodia is now a multi-party, constitutional monarchy.

I was born in Phnom Penh in 1962, the son of a carpenter, and I lived with my parents and 10 brothers and sisters until 1975 when the soldiers of Pol Pot’s regime drove everyone out of the cities. We had to leave without warning and at gunpoint with

Dr Chin Nareth
Consultant Anaesthetist
City of Hope Hospital
Phnom Penh
Cambodia
whatever belongings we could carry on our bicycles and were marched for 60 km into the countryside where we joined another family in a small house. After a few days, we had to leave that house and build our own shelter from wood and reeds in the open countryside. There was no food or clean water and we only survived by catching fish with our bare hands and living off whatever fruit, rice, animals or plants we could find. Conditions were very harsh: there was no money, no schools or hospitals, no books, no markets, no pagodas, no religion and no public meeting places. We were forced to live off the land and work in the fields from 7am-5pm, seven days a week. There was nothing else to do.

The following year (1976) when I was 14, the Khmer Rouge ordered us to move to another part of the countryside, 300km away, near the Thai border. They then ordered me to leave my family and, together with another boy, I was taken by train to a camp in the countryside where I lived and worked with a group of 20 other young men aged between 14 and 30. Here again, we worked in the fields for 10 hours each day, seven days a week, on a poor diet that consisted mostly of rice. We were only allowed occasional brief visits to our families every few months.

After more than three years of this harrowing existence, Pol Pot was ousted in 1979 when I was 17. We were allowed to return to Phnom Penh and found the city completely deserted with ruined buildings everywhere and no semblance of law ad order. Only three of the ten members of my family had survived the Pol Pot regime and my sister and I found an empty house where we lived.

There was no money in the city and we barely scraped an existence by bartering our few remaining possessions for food. Eventually a market was set up and we sold vegetables that we collected on foot from a farmer 10km away.

I discovered some books in the rubble of a deserted building and began to study in the open countryside. There was no food or clean water and we only survived by catching fish with our bare hands and living off whatever fruit, rice, animals or plants we could find. Conditions were very harsh: there was no money, no schools or hospitals, no books, no markets, no pagodas, no religion and no public meeting places. We were forced to live off the land and work in the fields from 7am-5pm, seven days a week. There was nothing else to do.

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Returning to Iraq after the War

Dr Hussain Karim
drhmakarim@hotmail.com

I am a consultant anaesthetist who has worked in the UK and Ireland for the past ten years. I graduated from the University of Baghdad in 1985 and trained in anaesthesia in the Medical City and Al-Yarmouk Teaching Hospitals in Baghdad: these are the two largest teaching hospitals in Iraq. I obtained my post-graduated anaesthetic qualification in the UK.

I decided to return to Iraq after the war in May 2003 to assess the medical situation and offer whatever help I could to the Iraqi people. With a colleague, Dr Steve Benfield from the Friarage Hospital, Northallerton in Yorkshire we set out on our mission with assistance from the Human Relief Foundation charity. When staff at the hospital and in the local community heard of our plans, they offered huge support and donated medicines, equipment and much needed funds.

Before we left London, we had the honour of meeting Prince Al-Sharif Ali Bin Al-Hussein, the heir to the Iraqi monarchy, who offered his support. I arranged to travel back with him to Iraq in June 2003 when he planned to return to his homeland after almost forty years in exile. During this second visit, the Prince brought medicine, equipment and gifts for children which he distributed when he visited the Children’s Hospital and Medical Centre Teaching Hospital in Baghdad.

The team left London on 16 May 2003. It consisted of two anaesthetists and two civil engineers who specialised in water sanitation. Ours supplies were transported separately as they weighed 750kg. We left the UK full of enthusiasm and hopeful that our trip would useful and would help in some small way to alleviate the suffering of the Iraqi people.

We arrived in Baghdad on Sunday 18 May to temperatures in excess of 40°C. Our initial reaction was one of dismay at the devastation caused by the war. The bridge on the main highway from Iraq to Jordan was badly damaged. As we drove into Baghdad we saw burnt out tanks and buses.

In the city itself we saw destroyed shopping and telecommunication centres. Government ministries and other official buildings had not only been damaged by bombing but had also been comprehensively looted. We were shocked to see queues for petrol in a country that has the second largest reserves of oil in the world. There were obvious problems with electrical supplies, water purification and telecommunications. Security concerns were paramount especially in the early morning and evening and there was a curfew in force from 11pm.

We were introduced to the problems of Al-Yarmouk hospital on the second day of our visit. The hospital had been directly hit during the bombing offensive and had suffered more damage than the other hospitals in Baghdad. This had been my teaching hospital when I was training and I was particularly sad to see the extensive damage it had suffered during the war. The hospital generators had been damaged by shelling and this had interfered with the water and electricity supplies to the hospital. The computers, air-conditioning units, drugs and medical equipment had been taken by looters worsening an already difficult situation as the hospital had already suffered from shortages before the war.

Doctors, nurses and other staff at the Al-Yarmouk hospital had not received a salary for three months but despite this, I was full of admiration at their courage, commitment and enthusiasm. The Red Cross, Red Crescent and other charities had already started restoration and repair work in the hospital. The HRF paid one month’s salary to 950 hospital workers. It also purchased air conditioning systems, refrigerators and computers for the hospital. We provided anaesthetic drugs and equipment purchased in the UK or donated by the James Cook University Hospital NHS Trust.

Dr Benfield and I administered anaesthetics at the Al-Yarmouk and Medical City hospitals and also organised
training session in general and regional anaesthesia for the anaesthetic staff. We met with our Iraqi colleagues to discuss medical needs and priorities. Top of their list was basic medical equipment such as disposable syringes, sterile dressings and drapes. Proper waste disposal and infection control are virtually non-existent. Another major priority is training: Iraqi doctors are very keen to update their knowledge and skills as they have long lacked access to modern facilities and technology. Iraq was the first centre in the Middle East to host membership and fellowship examinations of the Royal Colleges but because of the wars and sanctions, they have not been held for many years. Many Iraqi doctors felt that exchange visits or sponsorship programmes to enable them to spend some time at UK or other Western hospitals would be of great value. Likewise, there is a real need to improve the skills and training of nursing staff by similar initiatives.

Although I was shocked by the devastation to my homeland, I left Iraq hopeful that the future would be brighter for the country and its people. I feel doctors and other professionals have much to contribute to the re-building of the country and this must be done in cooperation with the Iraqi people who have suffered so much for so many years. We must approach the people and the country with sensitivity and understanding and, above all, with patience as there is a long road ahead.

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John Radcliffe Hospital
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Oxford, OX3 9DU,
UK
Tel: (+44) 01865 221589.
E-mail: michael.dobson@ndm.ox.ac.uk

Bristol (UK): December (annually).
Contact: Dr. Claire Jewkes
Department of Anaesthesia
Frenchay Hospital,
Bristol, BS16 1LE,
UK
Tel: (+44) 01179 701212.

Remote Situations, Difficult Circumstances, Developing Country Anaesthesia
Hobart or Launceston (alternate years),
Tasmania, Australia
Contact: Dr Haydn Perndt
Royal Hobart Hospital
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Hobart, TAS 7001
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Email: haydn.perndt@utas.edu.au

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USA
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International members are invited to join this Society that promotes techniques and excellence in the teaching of Anaesthesia.
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The TOKTEN Project
Expatriate nationals returning to their country of origin are invited to apply for the post of project expert. Each project is sponsored by the United Nations who would meet the cost of international travel and pay a subsistence allowance ($90/day). Applications should be made to the Minister of Health of the host developing nation.

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Institute of Child Health
Guldford Street, London WC1N 1EH
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Fax: (+33) 3 20 29 59 97
Email: j-meynadier@o-lambret.fr

The International Committee of the Red Cross (ICRC)
The ICRC acts to help all victims of war and internal violence, attempting to ensure implementation of humanitarian rules restricting armed violence.
Contact: ICRC, Recruitment Division
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CH-1202
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or your local society.
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UK
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E-mail: 106147.2366@compuserve.com

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UK
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Fax: (+44) 020 7404 4466 or
11 East 26th St.
Suite 1904
New York NY 10010,
USA
Tel: (+1) 212 679 6800.
Email: health.exchange@compuserve.com

US volunteers wishing to spend periods working in developing countries
Contact: Dr. Lena Dohlman
Health Volunteers Overseas
c/o Washington Station,
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Washington DC 20035-5157,
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Tel: (+1) 202 296 0928
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USA

World Anaesthesia
This organisation works to improve standards of anaesthesia throughout the world. In conjunction with the WFSA, it produces two publications, World Anaesthesia News and Update in Anaesthesia* (an add-on textbook) published twice-yearly. The annual subscription is £10. For further information
Contact: Dr. Ray Sinclair
Dept of Anaesthesia
Royal Truro Hospital (Treliske)
Truro,
Cornwall, TR1 3LJ
UK
Tel: (+44) 01872 274242
* also available on:
http://www.nda.ox.ac.uk/wfsa

Courses on Anaesthetic Equipment Maintenance
One week residential courses for anaesthetic technicians are organised at the NHS training and conference centre. Applications should be sent to:
Geoffrey Dillow
Conference Centre,
Wotton under Edge
Gloucester, GL12 8DA,
UK.

Association for International Development of Anaesthesia (A.I.D.A.)
Contact: Professor Stanley Samuels
Department of Anaesthesia
Stanford University Medical Centre
Stanford,
California
USA
Tel: (+1) 415 723 6411
Fax: (+1) 415 723 8544
Email: samuels@leland.stanford.edu

Commonwealth Medical Awards
Available to citizens of Commonwealth countries for limited periods of postgraduate study within the UK. Applications should be addressed to:
The Medical Awards Administrator
Commonwealth Scholarship Commission
36 Gordon Square, London, WC1H 1PE, UK

Medecins Sans Frontieres (MSF)
offers assistance to populations in distress, to victims of natural and man-made disasters and to victims of armed conflict. They require volunteers for both long and short-term projects. If you are interested in obtaining more information, contact them at:
MSF
124-132 Clerkenwell Road
London, EC1R 5DL
UK
Tel: (+44) 020 7713 5600
Fax: (+44) 020 7404 4466 or
11 East 26th St.
Suite 1904
New York NY 10010,
USA
Tel: (+1) 212 679 6800.
Email: http://www.msf.org or
http://www.dwb.org

WHO Liaison Officer
Dr M Dobson
Nuffield Department of Anaesthetics
The John Radcliffe Hospital
Headley Way,
Headington
Oxford, OX3 9DU,
UK
Tel: (+44) 01865 221589/741166
Fax: (+44) 01865 221593/453266.
E-mail: michael.dobson@ndm.ox.ac.uk
Electronic Publication of “Update in Anaesthesia”

- “Update in Anaesthesia” is an education journal produced by “World Anaesthesia”, widely distributed and acclaimed in many developing countries.
- An electronic version of “Update” including back issues is now available – you can read it on your computer screen (using suitable free software), and download and/or print all or part of it for reference.
- If you have an Internet connection you can access “Update” at http://www.nda.ox.ac.uk/wfwa It can be viewed with either a graphical browser (looks prettier) such as Netscape or a text-only browser such as Lynx.
- If you don’t have Internet access but do have a computer, we can post you the same material on floppy disk with instructions on use. (N.B. This only applies to developing countries.)
- You do not need the latest and most expensive computer to make use of Electronic Update: a 286-PC should be adequate. If you need technical advice, please write to Dr Mike Dobson, Nuffield Department of Anaesthetics, John Radcliffe Hospital, Oxford, OX3 9DU, UK., or send an Email request to: michael.dobson@ndm.ox.ac.uk
- An electronic version of “World Anaesthesia Newsletter” (incorporating “Anaesthesia Worldwide”) including back issues in similar format is also now available at the same Internet site.

Useful Information continued

Anestesia en las cardiopatias congenitas
It is a free internet course.

Duration: 10 weeks 50 hours (5 per class)
Starting date: Wednesday 5 November 03
Class rate: One per week
Enrolment: Opened.
Final Evaluation: Multiple Choice (test)

The Director of the site is:
Dr. Leonardo Rubén Gulman, Director Medico
Martin de Gainza 1053 1º B , CP: C1405AKS
Cuidad Ciudad Autónoma de Buenos Aires
Argentina
www.cursosparamedicos.com
lgulman@cusrosparamedicos.com
(+54 011 4982 0522
A further course will start on 4 February 2004
African Anaesthetist
Anesthesia & Critical Care Resources on the Internet
Anesthesia Web
Anesthesia International
Armenian Society of Anaesthesiologists
Audio Digest Foundation
Bandolier (Evidence-based Medicine)
Gaseous Anomaly
GASNet Anesthesiology Home Page
Illustrated Regional Anesthesia
Medical World Search
Primary Internet Resources for Anaesthetists
Primary Trauma Care Foundation
Society for Education in Anaesthesia
The National Library of Medicine
The Trauma Organisation
University of Chicago
Virtual Anesthesia Textbook
Virtual Museum of Anesthesiology
World Anaesthesia Online

Journals:
Anaesthesia
Anaesthesia and Analgesia
Anaesthesia and Intensive Care
Anesthesiology
British Journal of Anaesthesia
JAMA
NEJM
Science
The Internet Journal of Anaesthesia

Associations:
American Society of Anesthesiologists (ASA)
Anesthetic Research Society
Association of Anaesthetists of Great Britain & Ireland
Douleurs Sans Frontieres
European Academy of Anaesthesiology
International Anesthesia Research Society
International Society for the Study of Pain
International Trauma Anaesthesia & Critical Care Society
National Confidential Enquiry Peri-operative Deaths
Obstetric Anaesthetists Association
Royal College of Anaesthetists
Society for Ambulatory Anaesthesia
Society for Critical Care Medicine
Society for Computing and Technology in Anaesthesia
Society for Education in Anaesthesia
Society for Obstetric Anaesthesia & Perinatology (SOAP)
Society for Paediatric Anaesthesia
South African Society of Anaesthesiologists

World Federation of Societies of Anaesthesiologists

The editor would be delighted to hear of other sites that might be of interest and to learn of any site addresses that are incorrect or no longer function
Section of Anaesthesia

2003-2004 Programme

Friday 3 October 2003 at 5.30pm
Presidential Address
‘Better to light a candle than curse the darkness’

Education: a challenge in the developing world
Dr Frank Walters, President, Section of Anaesthesia

Friday 7 November 2003
Neurotrauma and Neuroanaesthesia
5.00-5.40pm (parallel sessions) Workshops: core skills for all
   Broken Neck
   Dr Ian Calder, The National Hospital for Neurology and Neurosurgery, Queen Square
   Patient with a dilated pupil in your A&E
   Dr Michael Milne, Frenchay Hospital, Bristol

6.00-7.30pm The brain: measurement and monitoring
   The burden of cerebral ischaemia in head injury
   Professor David Menon, Addenbrooke’s Hospital, University of Cambridge
   Motor evoked potentials
   Professor Cor J Kalkman, Academical Hospital, Utrecht

Friday 5 December 2003 5.30-7.30pm
Providing support overseas: different educational strategies
   Primary trauma care – a trauma educational programme for district hospitals in the developing world
   Dr Doug Wilkinson,
   The John Radcliffe Hospital, Oxford

Distance learning - principles, practice and pitfalls!
Dr Mike Dobson, The John Radcliffe Hospital, Oxford

Educational literature for anaesthetists in developing countries
Dr Iain Wilson,
The Royal Devon & Exeter Hospital, Exeter

Tuesday 27 January 2004
Joint meeting with the Paediatrics & Child Health and Surgery Sections
Topics will include Paediatric analgesia and sedation, neonatal surgery and organ support in PICU
Further details to be announced

Friday 6 February 2004 5.30-7.30pm
Training and Learning Opportunities Overseas
   Refresher courses overseas
   Dr Roger Eltringham,
   Gloucester Royal Hospital, Gloucester
   UK trainees overseas – VSO scheme
   Dr Clare Hamer, VSO, Banjul, The Gambia
   Organising and undertaking overseas training - a college perspective
   Dr Peter Simpson, Frenchay Hospital, Bristol

Friday 27 February 2004
Pain management for primary care
Further details to be announced

Friday 5 March 2004
5.00-5.40pm (parallel sessions) Workshops: Local anaesthesia
   Upper limb blocks
   Dr Martin Herrick, Addenbrooke’s Hospital, Cambridge
   Lower limb blocks
   Dr Barrie Fischer, Alexandra Hospital, Redditch

6.00-7.30pm Ethical issues at home and abroad
   Is there a role for an ‘ ethicist ‘ in the clinical setting? -
   Dr Mike Parker, Reader in Medical Ethics, The University of Oxford
   Developing ethics for research in the Developing World
   Dr Jane Barrett, Independent Pharmaceutical Physician, Wokingham

Seminars/Conferences
Friday 2 April 2004
Core Knowledge for Common Problems
5.00-5.40pm (parallel sessions) Workshops:
Current issues in anaesthesia for the aged
Dr Andrew Severn, Royal Lancaster Infirmary, Lancaster
Arrhythmia management
Dr David Gabbott, Gloucester Royal Hospital, Gloucester

6.00-7.30pm What is happening now with…
Burns: Plus ça change…
Dr Keith Judkins, Pinderfields General Hospital, Wakefield
TIVA
Professor Robert Sneyd, Derriford Hospital, Plymouth

Friday 14 May 2004
All day meeting
The challenge of anaesthesia for head & neck surgery: experience from home and abroad
Airway problems in the developing world
Dr Keith Thomson, North Hampshire Hospital, Basingstoke
Difficult intubation in children – have we forgotten the art?
Professor Adrian Bösenberg, Groot Schuur Hospital, Cape Town
Anaesthesia for cleft palates
Dr Sarah Hodges, Royal Devon & Exeter Hospital, Exeter
The shared airway
Dr Anil Patel, Royal National Throat Nose and Ear Hospital, London
New techniques for the difficult airway
Dr Jerry Nolan, Royal United Hospital, Bath
Blood volume measurement and management during prolonged surgery
Dr Stephen Pugh, University Hospital of Wales, Cardiff
Recovery: the end or a new beginning
Dr Chris Johnson, Southmead Hospital, Bristol

Friday 17 September 2004
Joint meeting with the Manchester Medical Society
Anaesthesia for head & neck surgery, plastics and maxillofacial surgery
To be held at The Manchester Conference Centre
For further information please call Fiona Lamb on 0161-273 6048 or e-mail admin@mcr-med-society.uk.net.com

16-19 September 2004
Traditional and innovative approach to pain management (in Siena, Italy)
Joint meeting with the Section of Anaesthesia, The University of San Miniato and SPIN
(Specialists in Pain International Network)
Further details to be announced

Annual Dinner
at the Athenaeum at 7.30 for 8.00pm

2-3 July 2004
Meeting in Pamplona, Spain
X Reunion Internacional de Formacion Continuada ed Anestesia - RSM
Section of Anaesthesia
Further details to be announced

Friday 11 June 2004 at 5.30pm
Annual Dinner, AGM, Prizes: SpR, Medical Student Winners
Guest Lecture: What really matters in health care provision?
Professor Paul Dieppe, Department of Social Medicine, Bristol
Interesting and Rewarding Job on Tropical Island!

There will be a vacancy for a senior lecturer in Anaesthesia at Fiji School of Medicine from February next year (or earlier for a short handover period) here are a few facts about the job for anyone who is interested and do get in touch if you are.

The department consists of Dr Sereima Bale and another senior lecturer. The second senior lecturer post is relatively new. Dr Sereima Bale was Head of Anaesthetic Department at the Colonial War Memorial Hospital and was appointed as the Coordinator of Anaesthetic Training in the Fiji School of Medicine at the beginning of 1998. Dr Bale has been instrumental in establishing undergraduate and postgraduate training at FSM. The Masters programs were developed as part of a 5 year AusAID project which spanned 1997-2002. The Australian Government continues to assist the Fiji School of Medicine in a major Academic and Development and Enhancement Program that looks to see upgrading of undergraduate diploma and certificate level to proper degree level programs and supporting the areas of research, postgraduate studies and distance learning.

Currently there is a total of 5 weeks anaesthesia in the undergraduate program. The anaesthetic component of the MBBS course has increased considerably. This change was brought about by the considerable efforts of Wayne Morris, my predecessor, and Sereima Bale. The increased exposure of medical students to anaesthesia affords the students the opportunity to gain core practical and clinical skills in anaesthesia and resuscitation. The students have welcomed this, they are often sent to remote medical facilities with little immediate support ‘on the ground’. In relation to the future of anaesthesia in the South Pacific I think this is an invaluable opportunity to inform and encourage any budding anaesthetists. All medical students attend a Primary Trauma Care (PTC) course whilst in Lautoka and this too is an opportunity for the students to develop skills and even more enthusiasm for anaesthesia!

The medical school is a very friendly place. Students’ numbers are small compared to the nameless hordes I’m used to as a result of the various rearrangements of London medical schools. As a consequence it is an informal environment where you can really get to know the students. They are invariably receptive and enthusiastic, not always the case at home. Teaching them can be very rewarding indeed. From my experiences on PTC course they are also great fun!

The postgraduate training consists of the Diploma in Anaesthesia (DA) and the Masters in Anaesthesia (IMEDA).

The Diploma in Anaesthesia program has been developed to cater for the needs of the Pacific. It is a program that covers anaesthetic techniques for all the common types of surgery and the management of the problems specific to each procedure. It emphasises techniques which are safe, economic and which are performed easily with the variable range of drugs and facilities available.

The Masters of Medicine in Anaesthesia degree has been developed as a high quality, locally sustainable program, customised to cater for the health needs of the Pacific Region. The program recognises the particular professional roles that are needed in the region and the physical and financial constraints on the practice of anaesthesia and intensive care. In addition the course is tailored to the specific educational requirements of the candidates seeking entrance to the program. Public Health is an integral aspect of the course and the Public Health department runs the relevant courses.

The course duration is four years. The first year of the master’s degree is the Diploma of Anaesthesia. There is no maximum period of time between completion of the diploma and commencement of the Master of Medicine in Anaesthesia. Of the four years, six months of experience in an anaesthetic department in either Australia or New Zealand is required.

These attachments will expose the trainees to experts in various fields of anaesthesia and allow concentrated application of clinical skills in these areas. These attachments are organised by the course coordinators.

So if you are enthusiastic about working somewhere like this and post fellowship do get in touch with me or Sereima on n.ahmad@fsm.ac.fj and s.bale@fsm.ac.fj

Nargis Ahmad August 2003
World Anaesthesia Database

Why not join World Anaesthesia today for the modest fee of £20 (or equivalent) if you work in a first world country? Membership is free to those working in developing countries. Just complete the form below and forward it to the Secretary with your cheque.

Name: ..................................................................................................................................................................................................................
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Age: …...................................................................................................................................................................................................................... Male ☐ Female ☐

Experience overseas:
Please list the countries where you have worked (other than your home country). Please add: the places in those countries, the dates and the type of work you were engaged in. (e.g. Disaster Relief, Support for refugees, Area of War/Conflict, Longer term medical missionary or secular relief agency work). Continue on a separate sheet if necessary:

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World Anaesthesia Database continued

**Particular interests:**
(e.g. subspecialities of anaesthesia/care of the critically ill, education, distance learning, appropriate research writing, disaster relief, conflict situations, medical missionary, long term secular:

Languages spoken: ....................................................................................................................................................................................................................

**Availability:**
Are you happy to answer enquiries relevant to your experience/expertise?    [ ] Yes    [ ] No
Are you able to write for WA publications?    [ ] Yes    [ ] No
Are you available for working visits abroad?    [ ] < 1 month    [ ] 1 to 6 months
How much notice do you require?    [ ] 2 weeks    [ ] 2 months    [ ] 6 months    [ ] > 6

Any comments: ........................................................................................................................................................................................................

Please complete this form as accurately as possible and return to:
Dr. C. Collins, Secretary, World Anaesthesia
Dept. Anaesthesia, Royal Devon and Exeter Hospital (Wonford), Barrack Road, Exeter, Devon EX2 5DW
United Kingdom Tel: (+44) 01392 411611     Email: stundoc@eclipse.co.uk