First Sierra Leonean Anaesthesia Conference
(Freetown 14-16 April 2009)

Dr K D Thomson
MB BS, DRCOG, FRCA
Consultant
Obstetric Anaesthetist
Basingstoke and North
Hampshire Hospitals
Foundation Trust

The Faculty

Dr Keith Thomson,
Consultant, Basingstoke
Dr Sarah O'Neill,
SpR5 Oxford
Dr Annemarie Docherty,
ST2 , Basingstoke
Dr Phil Docherty,
ST2, Portsmouth
Mr Richard Tully, Diamedica

Sponsors included the WFSA and the Shalimar Trust. Dr Iain Wilson has kindly arranged for the AAGBI to provide 70 copies of *Safe Anaesthesia*. Mrs Terri Bilton of Mercy Ships (**www.mercyships.org.uk**), manager of the Aberdeen West African Fistula Hospital, made it all possible by arranging our visas, accommodation and providing a suitable Toyota 4x4 vehicle and excellent driver, Jeremiah, for the duration of our visit. Sadly Jeremiah's wife had died recently two months after the home delivery of their third child probably from sepsis but he lives in the country with the highest maternal mortality in the World.

Introduction

Sierra Leone, a country of 5.5milllion people, is situated in West Africa between Liberia and Guinea. During the 1990s it experienced a particularly vicious civil war, the main cause of which was control of the diamond trade. Thousands of people were killed and many more had limbs deliberately hacked off by drug crazed teenage rebel soldiers representing the RUF.

The country now appears stable and there are direct flights three times a week from Heathrow to Lungi Airport which is five hours by road from Freetown. The faster available modes of transport are helicopter, hovercraft and water taxi. We used the latter (fig 1) which was the cheapest and seemed to have a good safety record, although at 11.30pm in the pitch dark, motoring fast, with loud music blaring, while bouncing around on the waves there


Fig 1.
Water taxi

was room for concern in spite of wearing a lifejacket! We stayed at the Barmoi Hotel in the Aberdeen area which had a pleasant swimming pool (fig 2), a reasonable restaurant and secure air conditioned bedrooms each with en suite bathroom.


Fig 2.
Barmoi Hotel pool

Pre-conference training

Development engineer Richard and I arrived two days prior to the rest of the team. He spent two days training the staff at the Italian run Emergency hospital in Goderich (**www.emergency.it**) to use a donated *Glostavent* anaesthesia machine (fig 3).


Fig 3.
Training to use the Glostavent

Apparently some of the cases were rather challenging especially a one-day-old baby with an abdominal mass which was ventilated, with difficulty, using the *Glostavent*. Antonio the surgeon, who had recently arrived from a hospital run by the same charity in Afghanistan, said in the pub afterwards that it was like 'operating on a rat which would not stay alive!'

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I think that children less than 15kg in weight should be anaesthetised with a T-piece circuit, using the *Glostavent* for a continuous flow of O_2.

I was involved with anaesthetist Dr Michael Koroma in finalising the logistics for the Conference which included a courtesy visit to the CMO Dr Daoh at the Ministry of Health although he seemed rather preoccupied with a fire at Connaught Hospital.

Anaesthesia services

Similar to Liberia, these fall far short of internationally accepted standards. There are only 36 trained anaesthetic nurses in Sierra Leone.

Fig 4 UNFPA funded vehicle

Since 2006 the UNFPA (fig 4) has been financing an 18-month training programme for nurse anaesthetists to increase the number of trained providers to 80. To enter the pro- gramme one must be an RGN with at least two years post-graduate experience plus 18 months midwifery.

Princess Christian Maternity Hospital (PCMH)

The team were pleased to discover that pre-op visits on patients were routine, anaesthetic charts (fig 5) were being used and the trainees were also compiling logbooks, however the only monitor in 'recovery' was the human hand (fig 6).

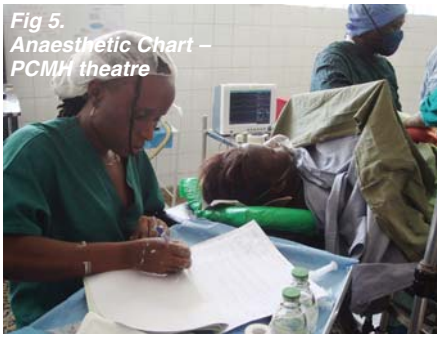

Fig 5. Anaesthetic Chart – PCMH theatre

Fig 6. Recovery

One of the main issues was the lack of a regular supply of anaesthetic drugs and disposables like IV cannulas and tubes. There was one modern anaesthetic machine but no soda lime. Supplies of blood were limited, for a patient to be given one crossed matched unit of blood they needed to pay 5000 leones (1GBP)

Fig 7. Blood bank technician

and provide two replacement. Osman (fig 7) the blood bank technician at the PCMH, said there was a shortage of blood bags but he told us he was group O negative and that over the years he had personally donated 29 pints. It was perhaps not surprising that post-partum haemorrhage was the commonest cause of maternal death.

One of the anaesthetic nurses said to me that to work in anaesthesia, particularly out in the provincial hospitals, you have to be a magician!

Fig 8. Dr Michael Koroma + anaesthetic nurses

The three day Conference

was organised by Dr Michael Koroma (fig 8) one of only two medically trained Sierra Leonean anaesthetists and Professor Yaw Adu-Jyamfi from Ghana and took place at the School of Nursing at Connaught Hospital (fig 9).

Fig 9. Conference banner

The power supply and air conditioning were both satisfactory. There were desks for most of the delegates who consisted of 25 trained and 20 trainee anaesthetic nurses. All the trained anaesthetic nurses were provided with a T-shirt and a name badge. A registration form was signed with attendees' name, hospital, mobile phone and email numbers.

Each day staff from the *Praun Cafeteria* provided refreshments consisting of morning tea, cooked lunch and a can of soft drink in the afternoon.

The first day consisted of lectures with topics including 'pre-op assessment,' 'The *Glostavent*,' 'the airway,' 'monitoring and 'post-op care.' In the introduction the trained anaesthetic nurses were given an essay to write on one of three topics: "A patient who should have lived but died" or "A patient who should have died but lived" or "Your most memorable anaesthetic experience".

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They were asked to write no more than two sides and to hand it in by the end of the second day. The first prize was $20 and the second prize $10. This was a significant amount as the monthly wage is less than $80. The full program and prize winning essays can be seen on the website **www.africansmiles.co.uk** under 'SIERRA LEONE.'

Fig 10. Sarah lecturing

The second day consisted of lectures (fig 10) in the morning and workshops in the afternoon plus in theatre training by engineer Richard on the donated *Glostavent* machine (**www.diamedica.co.uk**). 'CONNAUGHT GETS NEW GLOSTAVENT MACINE' was the headline in the 'Salone Times' the following morning. The workshops consisted of 'relationship with the surgeon' (Phil) 'adult basic life support and airway skills' (Annemarie), 'neonatal resuscitation' (Sarah), and 'the qualities of a good anaesthetist' (Keith).

The relationship of anaesthetic nurses with medically trained surgeons is always a challenge in Africa. It seemed that in Freetown with the support of Dr Koroma patients judged unfit for surgery could be cancelled or postponed by an anaesthetic nurse in spite of pressure from the surgeon.

Apparently all neonates are immediately suctioned after delivery, then given dexamethasone and vitamin K. I heard a sad story concerning non labelling of drugs from a anaesthetic nurse whose new born baby had died after being given syntometrine by mistake after being delivered by caesarean.

The third and final day

There were four lectures followed by a quiz. Phil gave a fascinating presentation on trauma management in Afghanistan based on his personal experiences in Helmand Province. The quiz consisted of projected questions in PowerPoint with a true or false answer. If one thought the answer was true one stood up, if one felt the answer was false one remained sitting. Interestingly enough the first prize was won on the second question which was '*hypotension and tachycardia are early symptoms of major obstetric haemorrhage*'. The answer of course is false but only one of the audience of 25 people knew why that was correct. We had another three rounds of the quiz for the trained anaesthetic nurses and the final round for the trainees. It did become slightly riotous at times but Phil did a good job keeping control. It was a problem persuading those eliminated to move from their seats to the side so those still involved moved to the front but they then obscured the screen from those at the back. Unfortunately I had not checked some of the slides since Monrovia six months before and was uncertain about some of the answers even after a discussion with my team!

Feedback forms

These were filled in anonymously and said that the conference was well organised and lively with talks which were refreshing and interesting. It was suggested that handouts should have been made available prior to the lectures, more time should have been spent on practical training using the *Glostavent* and that the quiz session should have been better organised. Future courses should last longer and be at least three times per year. Case presentations should be included as well as lectures on pain management and anaesthetic drugs.

The closing and opening ceremonies were well organised by Dr Michael Koroma and attended by a representative of the Ministry of Health and Sanitation, Dr Samuel Kargbo, a member of the UNFPA, Dr Jarrie Kabba-Kebbay and a senior hospital manager. Mention was made of the fact that Sierra Leone has the highest maternal mortality in the World and that this position could only improve! After the essays and quiz prizes had been awarded all the trained staff were individually given an attendance certificate, a CD of all the presentations and $20 for travel expenses.

Rest and Relaxation

For their first three days the anaesthetic team acclimatised themselves to the 'mayhem' of Freetown. This included visiting the Princess Christian Maternity Hospital and spending a couple of hours in a typical city traffic jam. On Easter Sunday afternoon after attending a very lively church service in Lumley the team found themselves on the deserted and beautiful Hamilton beach where we swam in the balmy sea and feasted on enormous barbecued lobsters at Samso's beach bar – what a life (fig 11)!

Fig 11. Lobsters!

In conclusion

Overall we felt the Conference went well and that a return visit should be made in 2010. All members of the team gave excellent presentations and fully deserved the thanks they received from the delegates. It was I think a unique experience for young UK based trainees to have visited one of the poorest countries in the World and seen at first hand the challenges of anaesthetic provision and training in such a resource limited situation.