Promoting safer anaesthesia and childbirth in Sierra Leone

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The Second Sierra Leonean Anaesthetic Conference and the first UK Sierra Leone Midwifery Conference were held at the Princess Christian Maternity Hospital (PCMH) in Freetown from 14-16 April 2011. The local organisers were Dr Michael Koroma and Sister Florence Bull. The programmes were co-ordinated by Dr Matt Walters (anaesthesia) and Ms Louise Emmett (midwifery).

The teams consisted of:

Anaesthetists (fig 1)

Fig 1. The Anaesthetic team

Midwives from Basingstoke (fig 2)

Fig 2. The Midwifery team

Dr Keith Thomson, Consultant (Basingstoke),
Dr Matt Walters, Consultant (Derby),
Dr Ruth Broadbent Consultant (Derby)
Dr Steve Morris, Consultant (Cardiff)
Dr Dave Place, Consultant (Cardiff)
Dr Paul Theron SpR (London)
Dr Ping-Yi Kuo SpR (London)
Dr Sarah Davidson CT2 (Basingstoke)
Miss Rebecca Thomson (administration)
Ms Louise Emmett
Mrs Rhiannon Grindle
Ms Hatty Ivey
Ms Ruth Morris
Dr Jenneh Kpakiwa (Germany)

Dr Shona Johnston (fig 3) a paediatric SpR, based in Reading was spending a year with VSO in Freetown, she assisted with the neonatal resuscitation and ABC for sick children workshops.

Fig 3. Dr Shona Johnston

Dr Jenneh Kpakiwa, born in Sierra Leone but now a second year obstetric trainee in Bremen (Germany) helped with the midwifery conference, social programme and communication issues. Mr Keith Brinkman of Mercy Ships co-ordinated logistics and drove the team via the mayhem of Freetown to beautiful beaches like Hamilton (fig 4) and Lumley for rest and relaxation.


Fig 4. On the beach

Sponsorship

- Mercy Ships – provided accommodation on board the *Africa Mercy* and local transport
- The Association of Anaesthetists of Great Britain and Ireland
- Mothers of Africa
- The Shalimar Trust
- The Squirrels Trust

Anaesthetic Conference Day 1 – paediatric topics

Registration was co-ordinated by Rebecca (fig 5). The delegates all signed in with their name, hospital, email (if available), phone number and job title. They were then given a notepad, pen, lanyard, pouch and a card on which they wrote their name. Stuck to the card was one of four

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Fig 5. Rebecca in charge of registration

different coloured stars (orange, yellow, green or pink) designating the different groups for workshops and also a number between one and six for the multidisciplinary breakout sessions on the morning of day 2.

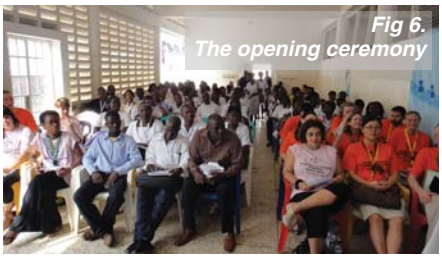
Fig 6. The opening ceremony

The opening ceremony (fig 6) lasted until nearly 11am and consisted of introductions followed by brief speeches from various individuals including Dr Michael Koroma, Louise Emmett, Florence Bull, myself and Christina Kallon (chair of SLANA). This was followed by drinks and a snack.

The Sierra Leonean Association of Nurse anaesthetists has about 100 members distributed between hospitals in 14 different districts. Training consists of two years nursing, one year of midwifery followed by18 months of anaesthesia. Of the 4 medically trained anaesthetists in a country of over 5 million people, one is Egyptian and works in private practice, one is from Ghana and the remaining two are Sierra Leonean.

Dr Matt introduced the four day 1 workshop topics: Airway Management + use of bougie, ABC – Sick children, Fluid and drug calculations in children and Critical Incidents in children. He also announced there would be a prize essay competition with the choice of two titles one of which had to be handed in by the end of the second day. The topics were either '*Write the job description for an anaesthetic nurse at your hospital*' or '*What one thing would improve anaesthetics in your hospital and why*?'

The workshops took place in four separate venues two of which were in the lecture hall (figs 7, 8, 9) which had been divided. These were preceded by short (10min) mini topic introductions. Delegates attended two before lunch and the remaining two after lunch.


Fig 7. Use of a bougie


Fig 8. The 'great' divide


Fig 9. Workshop in the library

The final item of the day was the quiz with questions based on topics covered in the workshops projected on a wall. All delegates were asked to stand up – if they thought the answer was true they put their hands on their head, if false by their sides.

Everyone also had to shut their eyes to prevent them looking at those colleagues they thought would probably know the correct answer! The first prize consisted of $10 and some anaesthetic equipment. After two rounds we ended the first day with the delegates having been given orange T-shirts which they were asked to wear the following morning. Dr Koroma had suggested they should be distributed at the end of the day rather than the beginning in case various 'hangers-on' at the opening ceremony such as journalists might want one.

Conference Day 2 – Obstetric topics

The day began with a teamwork demonstration of the management of obstetric haemorrhage 'starring' Dr Sarah as the patient. During practice on the ship the previous evening her groans had been so realistic that the on-board emergency team was almost called! The next item on the agenda was short presentations on ABC of resuscitation, fluid requirements and drugs/techniques in management of PPH.

The delegates were then divided into six multidisciplinary groups according to the number on their ID badge with each group having both a midwife and an anaesthetic facilitator (fig 10) to supervise the role play of two obstetric scenarios – one an APH and the other a PPH.


Fig 10. PPH scenario

After the morning snack there was a prize competition to estimate the volume of blood loss in four different scenarios (fig 11). After lunch the anaesthetists and midwives split once more into their separate groups.

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Fig 11. Blood loss competition

The anaesthetic programme consisted of workshops on neonatal resuscitation, epidurals and eclampsia/critical incidents. Day 2 for the anaesthetists ended with a Q &A session and another prize quiz.

Anaesthetic Conference Day 3

The day started with a presentation by myself on my role as an anaesthetist both in the UK and also on the Mercy Ships. I finished with a plea for a more organised post-operative recovery setup in local hospitals. Mini topic introductions were then given preceding the workshops on Pulse Oximetry, WHO check list, chest trauma and spinals.

There was a final prize quiz before the winners of the essay prizes were announced. The essays were impassioned and described well the challenges of attempting to provide a safe anaesthesia service with limited resources. (The efforts of the four prize winners are available on **www.africansmiles.co.uk** under SIERRA LEONE. At the closing ceremony every anaesthetic delegate was given, an attendance certificate signed by Dr Koroma and myself, a CD of all presentations, a bag of disposables – tubes/bougies /spinal needles etc, and also an envelope containing $20 for travelling expenses for which they each had to sign (Fig 12).


Fig 12. Prize giving

79 anaesthetists attended including 20 trainees. The other conference was attended by 28 midwives, four of whom were students. The certificates were handed out by Dr Sahr Kpakiwa (fig 13) who can be regarded as the 'father' of Anaesthesia in Sierra Leone.


Fig 13. Dr Sahr Kpakiwa

For many years he was the only medically trained anaesthetist in the country but since 1996 he has been working in Saudi Arabia to fund both his retirement and also his two daughters' medical education in Germany.

The Midwifery Conference – Louise Emmett


Fig 14. Midwifery lecture

The Midwifery Conference (fig 14) was based on a series of interactive workshops to gain practical experience in areas such as neonatal resuscitation (fig 15) and perineal


Fig 15. Neonatal resus

suturing (fig 16), develop team


Fig 16. Suturing workshop

working skills and promote communication.

The main themes we concentrated on were promoting normality in childbirth, early recognition of seriously ill women and first line treatment in an obstetric emergency.

Workshops involved demonstrations, dancing, simulations and lots of laughter. Our midwifery counterparts shared with us their style of teaching by performing the songs and dances they use to educate women about health issues. The midwives and also our lone male obstetrician who bravely joined us were extremely quick to retain the information we shared and quickly grasped the messages we were trying to convey.

In summary

Both Conferences were well received and the format of workshops rather than long formal lectures seems to have been more effective in encouraging participation by delegates. How one judges any long term effect on anaesthesia and midwifery services in Sierra Leone is difficult to ascertain but it was good for medical professionals from all over the country to meet together, make new contacts and discuss universal issues of lack of resources, equipment and pay.

All the team members worked incredibly hard, spending on average more than three hours each evening preparing their presentations and workshops for the following day.

Having Rebecca there to help with the administration proved an essential part of the running of the conference. It could easily have descended into chaos without someone specifically dedicated to co-ordinating and ensuring the change-over of workshops was on time. She was also able to liaise with Dr Koroma and his helpful secretary who typed out the lists of all the delegates present.

In the evening after the final day half the team members relaxed on board the Ship but the others took the

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opportunity under Dr Jenneh's guidance to sample some of the nightlife Freetown has to offer including Paddy's Bar and a night club called 'The Office' both situated in the Aberdeen area to the West of the city. *Africa Mercy* protocols dictate that all crew have to be back by 2300 unless they have an overnight pass so seven of our team spent the night as guests at the Aberdeen Women's Centre – the deal for Bed and Breakfast being the donation of a pint of blood – a very valuable commodity in a country with the highest maternal mortality in the world. Several of them required a degree of rehydration before their BP was deemed normal enough to be a donor (fig 17).

Fig 17. My BP is rather low!

The blood was taken by Augustin, the competent local laboratory technician who had lived and worked in London a few years ago.

The next morning the rest of the team except Dr Matt, who had agreed to give a 37 min radio interview on SLBC with Michael Koroma and Florence Bull were driven by Keith Brinkman to the Aberdeen Women's Centre.

Fig 18. Blood donors

After nine of the team had donated blood (fig 18), we all went to Lumley beach for a swim in the wonderfully warm sea and a lunch of fresh barracuda at *Roy* restaurant (fig 19).

The final Day in Freetown

We all went on a guided walking tour shepherded by my long term friend Simeon Sesay, his brother and son.

Fig 19. Restaurant on the beach

We passed the city's main landmarks including 'Clock tower,' PZ (point zone)' and the 'Cotton Tree (fig 20).'

Fig 20 The Cotton Tree

We visited the craft market, the Crown Bakery and some of us went to Connaught Hospital where we attempted to fix problems with the *Glostavent* anaesthesia machine (**www.diamedica.co.uk**) donated in 2009.

Dr Matt agreed to return the next day to anaesthetise an 11-year old-child for a bronchoscopy to remove a foreign body situated in the left main bronchus (fig 21) – a procedure which apparently took 3.5 hours.

Fig 21. Pre-op examination

At around 9pm after a 40 minute water taxi trip across the bay we arrived by minibus at Lungi airport at least 3 hours before our scheduled return BMI flight to Heathrow but even so two of the party were told initially that all the economy seats were taken! Apparently check-in had begun at 6pm (six hours before take-off) and most other passengers had already checked in their baggage, obtained their boarding cards and returned to their hotel. Ruth and Louise were only allowed to board the plane because two club class passengers did not turn up. Six hours 20mins later we landed at London Heathrow on schedule.

Postscript – Dr Paul Theron

An anaesthetic nurse working at the Aberdeen Women's Centre anaesthetised a patient for the removal of a retained placenta on the evening after attending the 3rd day of the conference during which we specifically spoke about the importance of the saturation monitor and about being prepared for adverse events. The patient had had a mild PPH and the anaesthetic nurse gave ketamine. Unfortunately neither the oxygen concentrator nor the monitors were working. There was a battery powered pulse oximeter on the anaesthetic machine but it was not in use when Dr Susanna (from Germany), the resident anaesthesiologist, walked in to check what was happening, she immediately attached the pulse oximeter probe to discover an oxygen saturation of only 74%. The anaesthetic nurse seemed unfazed and said something along the lines of "*Oh well, it's the will of God*." Such a fatalistic world view is difficult to alter.

Granted, there are many things that we are not in control of but there are also many of which we are. Susanna called someone who was able to fix the oxygen concentrator before the end of the case. The patient survived although possibly minus a few neurons.

www.mercyships.org.uk