ABCDE For Gulu
(14-15 October 2009)

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Introduction

The Northern Ugandan town of Gulu was a centre of activity for the notorious rebel group, the *Lord's Resistance Army* (LRA) under the command of Joseph Kony until 2006 when the National army forced them back to the Congo and Southern Sudan. Over the years many children were captured and forced against their will to become soldiers sometimes after having had to kill their own parents.

The Team

Dr Keith Thomson	Consultant Anaesthetist, Basingstoke
Dr Nick Jones	Consultant Anaesthetist, Basingstoke
Dr Alex Bojarska	Consultant Anaesthetist, Manchester
Dr Greg Boden	Consultant Neonatologist, Reading

The four of us had left a Basingstoke Hospital Maternity team visit to Hoima Hospital to be the faculty at a two day conference on *peri-operative care* held at the Churchill Court Hotel in Gulu.

En Route

The six hour drive from Hoima with Prof Moro included a stop at the Misindi Hotel for tea (fig 1) and also


Fig 1. Tea at Misindi

our first glimpse of the Nile (fig 2).


Fig 2. The Nile

We also saw African longhorn cattle (fig 3), prisoners at work repairing a


Fig 3. African longhorn cattle


Fig 4. Prisoners at work

road (fig 4) and Vervet monkeys


Fig 5. Vervet monkey by the roadside

(fig 5). We visited St. Mary's Lacor Hospital on the outskirts of Gulu at the invitation of British anaesthetist Dr Ray Towey. He kindly gave us a guided tour during which we visited the maternity unit, paediatric ward, operating theatres and the ICU. The ten bedded unit was mainly used for surgical, tetanus and head injury patients. It looked clean, spacious and appropriately staffed (fig 6),

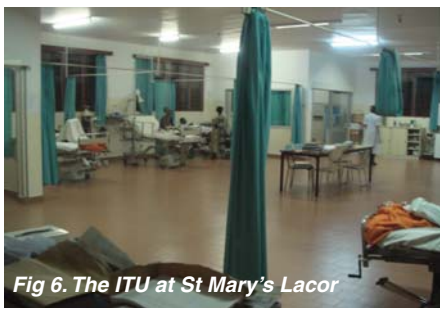
Fig 6. The ITU at St Mary's Lacor

the main ventilator was a Glostavent anaesthetic machine (fig 7).

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Fig7. RayTowey + Glostavent

We also saw Dr Towey's famous food processor used to prepare naso-gastric supplementation (fig 8).


Fig 8. Ray's NG food processor

Data had been collected for a number of years allowing important conclusions to be drawn about intensive care treatment in this setting. The operating theatres looked well organised and equipped (fig 7) and

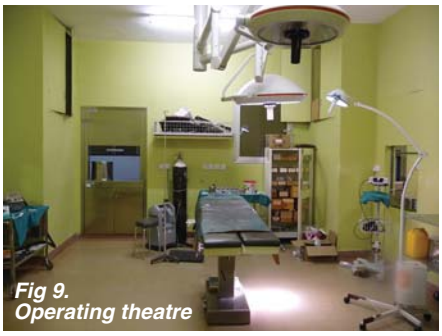
Fig 9. Operating theatre

there was even a dedicated recovery area which we were told was staffed 90% of the time. The hospital had 13 anaesthesia providers (1 MD, 3 anaesthetic officers and 9 trainees)

Dr Towey mentioned the *spirit* of the Corti family who had founded the hospital. This was the spirit of commitment, still present in the hospital, which was exemplified in 2003 when 13 staff including the hospital director died in an Ebola epidemic because they continued to care for their patients. Over 75% of the hospital's annual funding is still provided by the Corti foundation based in Italy.

It is interesting to compare the difference between mission or NGO hospitals and government run institutions in Africa. Previous visits, including this most recent one, seem to confirm a similar pattern: the mission or NGO hospitals seem to function, but the government hospitals are usually dysfunctional to varying degrees. We identified at least three factors which make a difference: good management, usually with European input, a Christian or strongly ethical ethos and overseas financial backing.

The conference

This was organised by Prof. Emmanuel Moro, former medical director of Hoima hospital and now the newly appointed professor of surgery at Gulu Medical School (fig 10).

Fig 10.

The sponsor, represented by an American – Mollie Fair, was the UNFPA which was involved with population and development issues.

She recently visited a local village where the inhabitants believed that the HIV virus went to sleep during certain times of the day!

We had intended the conference to be mainly for anaesthesia providers but of the approximately 100 participants more than half were either 5th year medical students or student clinical officers (on a three year training course). The remainder were anaesthetic officers, midwives, nurses with a few physicians and surgeons. Most of the lectures we gave were general enough to be of benefit to the range of different medical professionals present (fig 11).


Fig 11. Lecture in progress

Day 1

The Dean of the Medical School Prof. Emilion Ovuga opened the conference and chaired one of the sessions. The standard of chairing during both days was very high with sessions kept to time and discussions relevant. The full programme can be seen on the website **www.africansmiles.co.uk** under UGANDA – Gulu Programme.

The Presentations

These were chosen to highlight areas where lack of appropriate medical management may lead to significant mortality or morbidity in sub-Saharan Africa

Keith spoke about worldwide **maternal mortality** which is more than 600 000 per year (1500+ pregnant women dying every day), 99% of these deaths are in developing countries. The 'big five' killers are: haemorrhage, eclampsia, sepsis, obstructed labour and unsafe abortion. He emphasised the benefit of a multi-disciplinary approach and good communication between maternity staff, areas which are lacking in many African hospitals. Simple interventions for treating post-partum haemorrhage like bimanual uterine compression or insertion of an intra-uterine balloon were recommended. The latter can be cheaply made out of a Foley catheter and a condom.

Post-operative recovery (Keith) is an important topic which does not exist in many hospitals in Africa. This can be defined as the period of time between the end of surgery/ anaesthesia and when the patient is awake, pain free and physiologically stable.

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Patients in African hospitals are often transferred from an operating theatre directly to an understaffed ward or left unattended and unmonitored in the theatre corridor, usually lying flat on their back with the risk of airway obstruction or aspiration.

Post-operative pain control (Nick) is another neglected area. Pain is generally accepted as part of life by patients and staff (quote by Prof. of anaesthesia in Togo – *Africans sont forts*). There is a shortage of analgesics, especially opioids but even simple drugs which are often available like paracetamol, ibuprofen and tramadol are not used in a structured way. If tramadol is used then paracetamol would not be given, as a multimodal approach to pain relief is rarely considered. There is often an irrational fear of addiction to opioids, which may prevent staff prescribing or administering them even when they are available.

Sick patients requiring laparotomy (Alex) have a high mortality because pre-operative optimisation is rarely practiced in African hospitals in spite of the fact that patients usually present late with profound dehydration, hypovolaemia, electrolyte disturbance, and oliguria. A correct diagnosis is usually made and the patient is then taken straight to theatre often with no anaesthetic assessment or pre-op resuscitation. The talk recommended the ABCDE approach as a way of managing any critically ill patient.

Neonatal resuscitation is an intervention which, if done properly can save many lives. Greg reinforced a structured and simple approach while continuously assessing the four vital parameters: *colour, tone, breathing* and *heart rate*. He emphasised that SUCTION was NOT needed as this only causes bradycardia and spasm of the cords. His training obviously had an effect as neonatal suction catheters were the only items left behind from the donated disposables we distributed!

Alex's presentation on **blood transfusion** generated an interesting discussion. There is usually a shortage of blood available for transfusion in African hospitals. This is exacerbated by people being reluctant to donate as this requires testing for HIV. In Uganda the situation seems to be worse than in other countries because of centrally made decisions. Apparently, the main haematology laboratory in Kampala does not allow district hospitals to do their own blood testing and cross matching a skill which is easily within the competency of a trained laboratory technician. They claim it is about quality control regarding HIV testing but people think it is about power and control. We saw the dramatic consequences of this decision making in Hoima, where all blood including that for an emergency had to come from Kampala about three hours drive away. Some mission hospitals choose to ignore this decision, especially in an emergency, when fresh blood is collected from relatives but government hospitals seem to stick to the policy and as a result patients die even if their relatives are willing to donate compatible blood. This is an issue which really needs to be addressed.

An Italian physician attending the conference worked at St Joseph's Hospital in Kitkum, where his wife was also the obstetrician. He told us he had donated two units of his own blood in advance of his wife's recent 4th and luckily uncomplicated delivery. He also said that recently he had found a woman with a severe PPH on the labour ward – the midwife said don't worry I have given her some '*Pampers*'!

Alex's presentation included discussion on ways of decreasing perioperative blood loss and avoidance of hypothermia, which can happen in a hot climate in an air-conditioned theatre. Different techniques were discussed including auto-transfusion with blood recovered from the abdominal cavity after it had been collected and filtered through gauze.

Prof Moro presented an interesting study on **psychological and physical trauma in 26 children** (aged 5-17, 23 of whom had been abduct-ees) affected by war in northern Uganda which had lasted 20 years. This generated much discussion particularly with the medical students.

After lunch there was a choice of three workshops:

1. **Neonatal resuscitation station** run by Greg (fig 12) who did a fantastic job. Every participant had

Fig 12. Neonatal resus training

the opportunity to practice hands-on resuscitation on a dummy in a context of a clinical scenario.

2. **An airway station** run by Nick (fig 13) was attended mainly by anaesthetic medical officers and a few medical students.

Fig 13. Airway management

He emphasised the need for careful pre-op assessment and preparation in the case of a challenging airway. Various simple manoeuvres were practiced on a dummy, also the use of simple adjuncts including bougies and laryngeal masks.

3. A **PRIME** session (www.prime-international.org.uk) was led by Alex and Keith. The audience was split into small groups who then discussed issues which included *what it means to be professional*,

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what it means to be a good doctor and *the qualities of a good team*. There were some excellent points raised by the nominated representative of each group (fig 14)


Fig 14. PRIME session

The final event was the ***PRIZE QUIZ*** which provoked much hilarity and was an opportunity to reinforce some of the points mentioned in the presentations. The question which eventually produced an outright winner was 'Pre-op assessment of the airway always indicates a potential difficult intubation – true or false?' Only one man sat down to indicate correctly that he thought the answer was false.

Comments
The feedback we received from 56 of the participants, who completed the form, was very positive, Most classified the organisation, programme and presentations as *excellent* or *very good*.

It was felt that this type of conference should be continued on a regular basis but there should be more advance warning of the event and some presentations should also be given by local medical professionals.

Minor criticisms also included the absence of handouts prior to the meeting, no accommodation for attendees from out of town and an inadequate supply of food at lunchtime.

We believe it was valuable to have had so many intelligent medical students participating as they are a group who are not yet entrenched in their views and are thus more open to new ideas.

Future proposals
Alex plans to return in the spring with a group from Wythenshawe Hospital in Manchester who have already established links with the medical establishment in Gulu. In fact we met Marian Surgenor and her team, which included a hospital manager, while we were staying at the Churchill Court Hotel. Also Nigel Rossiter, a Basingstoke orthopaedic surgeon, has been in communication with Prof. Emmanuel Moro regarding the organisation of a *Primary Trauma Course* in Uganda towards the end of 2010.