Report on one week trip to Takoradi Hospital, Ghana in November 2008 to work with Operation Hernia.
Dr Deborah Harris

Charity and Background

Operation Hernia is a registered charity: a non-profit making organisation, which was set up by Professor Andrew Kingsnorth, president of the British Hernia Society in 2005. It is a surgical programme aimed at treating and teaching inguinal hernia surgery in low and middle income countries. Initially in Takoradi, Ghana, it now operates in three other West African countries, Mongolia and Ecuador. Volunteer surgical teams are recruited principally through the European Hernia Society.

In 2008 teams from the Czech republic, UK, South Africa Belgium, Spain and Poland all worked with the charity in Ghana and at least 500 people underwent surgery. Mr Chris Oppong, a Ghanaian, is the project coordinator for Ghana and works with Professor Kingsnorth at Derriford Hospital, Plymouth.

It has been estimated that in rural Africa only one in five hernias requiring surgery are operated and this results in unnecessary morbidity and even mortality, not to mention the economic and social problems associated with the difficulty of manual labour.

Personnel

Our team consisted of four surgeons, including Mr Oppong and Mr Jacob Akoh, a Nigerian surgeon working in the UK, five theatre and recovery nurses and myself. I was the first UK anaesthetist to work with the charity as usually the local nurse anaesthetists provided anaesthetic cover for the surgery.

We divided into three teams in three different medical facilities. I remained in the Ghana Ports and Harbour Authority Hospital, Takoradi though the surgeons rotated round. I later realised that this was because previous missions had expressed some concerns regarding the expertise of the nurse anaesthetist in this hospital and her reluctance to perform spinal anaesthesia.

Facilities

We had a dedicated theatre with scrub nurses, runners and an orderly/fixer. The theatre was basic, with a table for surgical equipment, sutures and swabs, a sink to scrub in and a large jug of water as the supply was intermittent. Adjacent to theatre was a room that doubled up as changing and rest room. Both lead on to a corridor that contained a store room and a recovery ward which was staffed by two very keen nurses. One cylinder of oxygen was available but had to be requested, as did pulse and blood pressure monitoring. There was also a preoperative ward where the patients could be assessed prior to surgery although some medical screening had already taken place. It was here that we all saw the patients together and decided on an order for theatre and whether they were suitable for local, regional or general anaesthesia.

There was an old Dräger anaesthetic machine in theatre, complete with ventilator (which worked) and a canister of soda lime (which didn't). The only monitoring was a stethoscope and a manual sphygmomanometer. There was no oxygen warning alarm and the machine was driven by an I size oxygen cylinder in the corner of theatre which had no pressure gauge. Fortunately there was a replacement outside in the corridor and I had already checked that it was probably full-ish when a change in tone of the ventilator alerted me to the drop in pressure and we were able to change over.

Thiopentone, ketamine , midazolam, atropine, ephedrine, and suxamethonium were all immediately available and, after protest from me adrenaline and an self inflating resuscitation bag appeared from the maternity theatre downstairs. I could not establish whether we were thus leaving them short. Post operative analgesia consisted of paracetamol and diclofenac. The dispersible preparations were particularly useful as they could be divided and given to the children. Buccal stemetil was used as an antiemetic. All the patients except one who was already an inpatient went home the same day.

For all these reasons Operation Hernia had decided that as much surgery as possible should be done under local or regional anaesthesia.

Workload

In total we operated on 97 patients. Only 20 of these were done in our hospital because we tended to do the larger, more complicated surgery and the revisions. Two were done using local anaesthesia alone. The ages ranged from 18 months (11 Kg) to 90years. 11 patients were operated under spinal anaesthesia which was supplemented as necessary by bupivacaine or ketamine. One spinal failed and was converted to a GA. One patient with a difficult recurrent hernia was electively given a general anaesthetic which was uneventful.
The children were given intramuscular ketamine , followed by a cannula and a spontaneously breathing anaesthetic on a facemask with halothane in 100% oxygen. Analgesia in these cases was provided by ketamine and bupivacaine.

My role was to encourage and support the nurse anaesthetist who also had to cover the obstetric department and as far as I could gather was permanently on call. It was no wonder she felt the need to pace herself! She was under confident with spinal anaesthesia and I persuaded her to do almost all of these. We had quiet teaching sessions in the corner of theatre and we covered regional anaesthesia, resuscitation, paediatrics and obstetrics as well as other topics that cropped up. As is common, one of the biggest problems was to persuade her to stay in theatre once the surgery had started – one advantage of holding a mask on. I felt it was important to make her techniques safer rather than persuading her to do something completely different, for example I think I persuaded her that the addition of a bit of atropine to the ketamine/halothane combination in infants and small children would be a good idea.

Social arrangements

We were met at Kotoka International Airport, Accra, by Chris Oppong, who had come out ahead of us to see his family, in a government bus which then drove us the four hours to Takoradi and the government villa where we stayed. Our accommodation was more than adequate though the water supply was intermittent and the upper rooms without air-conditioning were very hot at night.

The logistics of our stay including travel to and from the hospitals, visits to a local orphanage and to beaches were all arranged by Mr Brian Dixon, a British businessman working in Takoradi for Canadian Natural Resources. He has supported the charity for some time and without him I suspect our travel arrangements would have been chaotic and our working days considerably shorter. He also engaged four local ladies to look after us while we were there and they bought the food, cooked our meals and made our packed lunches every day, and took us shopping. We were responsible for the cost of this and of the accommodation.

Brian arranged for us to see something of the surrounding countryside, the docks, whose main export is cocoa, and we also had a haunting visit to Elmina castle which was used as a holding area for slaves under the Portuguese and subsequent Dutch and English administrations.

Summary and Recommendations

Ghana is a wonderful country full of warm, friendly people and we were made to feel very welcome there. Operation Hernia undoubtedly does a fantastic job and has now helped thousands of people. A tremendous amount of work has gone into the set up and organisation. I think we worked well as a team – we tried to emphasise the safety aspects of consent, checking the patient and the operative site once we were in theatre and management of sharps. I took my own PEP pack and Chris Oppong also had two packs in case of needlestick injury. Unfortunately one of these packs had to be used. HIV testing was available though not routine. I thought it was a shame that there was not more teaching of local surgical personnel. Reading reports on previous missions it appears this was unusual. We were told the surgeons were busy elsewhere, and there was also a national surgical conference taking place concurrently. There is no doubt that elective surgery is not top of the list of priorities for the hospital. The local scrub nurses seemed reluctant to get involved but did help a little so we only really saw a couple of medical students and the nurse anaesthetist in theatre with us.

From a personal point of view I felt that had I been told about the anaesthetic concerns before I went I could have started to address them as soon as I got there rather than a couple of days later. I didn't feel that a week was long enough to make significant inroads into the problems. An Irish anaesthetist went out shortly after me and I briefed her on the telephone so that she was able to reinforce some of the safety issues we had encountered.

The nursing staff are keen to have teaching and input from abroad and I felt they would benefit from intensive teaching in recovery and the anaesthetic care of the obstetric and paediatric patient. I was disappointed that the medical personnel did not engage more with us though I know there could have been a multitude of reasons for this.

I thoroughly enjoyed my week and my one big success was to make the anaesthetic nurse clean out the drawers of the anaesthetic machine. These were full of junk that she said was indispensable! I probably wouldn't go again because for me, the teaching side and the feeling that I left something behind are really important and I get more satisfaction from, for example, teaching Primary Trauma Care. It would be an ideal opportunity for an experienced registrar, though, to experience anaesthesia in a developing country in a relatively protected environment

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