The challenge of managing burns in a Ghanaian hospital

This article discusses some of the challenges faced by healthcare specialists working in Ghana. The author describes her experience working in a hospital in this West African country as part of an elective placement. She describes some of the cases treated at the unit and discusses the country's health service from a Western perspective.

Authors:
Rebecca Heath, Stuart Enoch

Page points

1. *Burn injuries caused by gas explosions are common in Ghana.*
2. *The healthcare service in Ghana is a national insurance opt-in system.*

Useful links

How to accurately assess burn depth

INTRODUCTION

Having passed her medical exams, the author spent a two-month elective placement in Ghana, where she faced daily ethical dilemmas, such as, patients being refused treatment if they had not paid the equivalent of £7 for their national insurance to cover medical care and many being unable to afford dressings or intravenous (IV) fluids. She also experienced a very different healthcare service, much less privileged than the UK National Health Service (NHS), for which the author currently works as a foundation doctor.

The author worked for one month in Korle Bu — one of the largest teaching hospitals in Africa — in the plastic surgery department, where she encountered a huge variety of cases, including numerous burns. She spent the other month in Kwahu Government Hospital — a small community hospital (about 100 beds and staffed by just three doctors) situated outside of the capital, Accra.

Ghana lies on the west coast of Africa, a few degrees north of the equator and its population of approximately 24.5 million is ranked as a lower-middle income economy by the World Bank with 27% of the population living on less than $1.25 a day. Ghana is best known for its cocoa produce, which it exports all over the world, but it also remains one of the top gold producers in the world.

The average life expectancy at birth in Ghana is 64 years of age[1]. There is a ratio of 15 physicians per 100,000 and the healthcare system recently benefited from a cash injection of €52m from the European Commission (January 2012) to help reduce maternal mortality. Hopefully, this will not be hampered by corruption, which has been the downfall of previous attempts to improve the country's health service.

HEALTHCARE IN GHANA

The healthcare service in Ghana is a national insurance opt-in system that, as previously mentioned, costs individuals approximately £7 per year. However, many people cannot afford what appears to be a negligible cost from a Western perspective. The medical bills incurred for patients without health insurance cover can be astronomical, sometimes amounting to an entire year's income. Even with healthcare insurance, patients are required to pay for their treatment, although the cost is dramatically reduced.

People have to pay for their own dressings and IV fluids, which relatives then bring to the resuscitation area. The longer-term care for wounds and dressings is exorbitant for a Ghanaian and many cannot justify or afford it.

However, the plastic surgeons working in Korle burns unit are highly skilled and do have the expertise to perform many basic burn-related surgeries, such as skin grafts *[Fig 1]*.

BURNS

Burns are commonplace in Ghana[1]. During

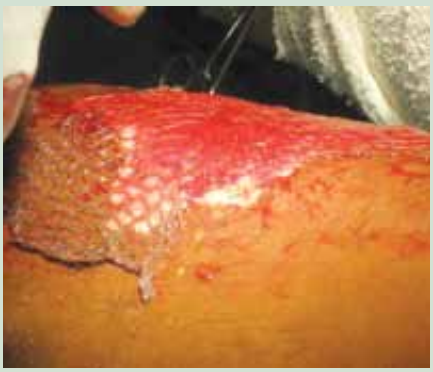

Figure 1 – Skin graft being laid onto a wound at Korle Bu, Ghana.

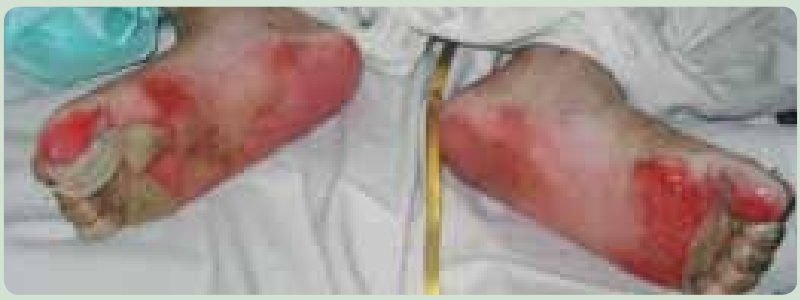

Figure 2: Deep dermal burns involving the soles of both feet.

Figure 3: The operating room when the patient arrived following a gas explosion. He was rapidly intubated, cannulated and catheterised on arrival.

Figure 4: Fasciotomy being performed in the patient's left forearm.

the author's stay at the hospital, one patient, a seven-year-old boy, was admitted to the hospital in a critical condition. He had severe burns *[Figs 2-4]* caused by a gas explosion — a common occurrence in Accra. Both his 11-year-old sister and his father had been seriously injured in the explosion. Desperate, but futile, attempts were made to resuscitate the young boy, who also underwent emergency fasciotomies [3]. He died three days later.

Having just spent two months at the Burns Service at Royal Manchester Children's Hospital in the UK, the author found stark differences in the care offered in the event of such an injury. Patients admitted to the Manchester hospital are usually thoroughly evaluated and appropriately resuscitated with fluids in the presenting A&E department before being transferred to the burns unit.

Once in the burns unit, their physiological parameters are monitored closely, fluid resuscitation continues, nasogastric feeding commences and wound dressings are applied. If required, they are taken to theatre for debridement of the burn — emergency theatre is available 24 hours a day.

Page points

1. *Patients in Ghana are expected to pay for their own dressings and intravenous fluids*
2. *Many patients with loss of function, due to contractures, are seen in outpatient clinics in Ghana*
3. *The plastic surgery service in Korle Bu, Accra's main teaching hospital, is in high demand, being the only place in the country with plastic surgery care.*

References

1. Life expectancy at birth, total (years). World Bank 2010. Available at http://data.worldbank.org/indicator/SP.DYN.LE00.IN
2. Agbenorku P, Edusei A, Ankomah J.Epidemiological study of burns in Komfo Anokye Teaching Hospital, 2006–2009. *Burns* 2011; 37: 1259–64

Page points

1. The lack of multidisciplinary teams in Ghana has a significant impact on burn wound outcomes
2. During the author's time in Ghana, she witnessed the detrimental impact that a lack of basic wound dressings can have on a patient, in terms of infections and longer-term consequences

MULTIDISCIPLINARY TEAMS

The author had seen similar cases to that of the seven-year old boy *[Figs 2-4]* during her time in Manchester Children's Hospital. In the author's experience, in the UK, patients of this age range with similar wounds would receive an enormous amount of multidisciplinary input during their slow but steady recoveries.

A lack of multidisciplinary teams has a huge impact on burn wound outcomes in Ghana. An example of this was the case of a 21-year-old woman who was admitted for a revision of her contractures *[Fig 5]*. The lack of a multidisciplinary team exacerbated the need for revision surgery, which could have been avoided by employing physiotherapy, occupational therapy and early education regarding normal and hypertrophic scarring. Many other patients with loss of function, due to contractures, were seen in the Ghanaian outpatient clinics due to the fact that, post-injury, they had no follow-up service for physiotherapy or occupational therapy.

During the author's placement, the majority of patients attending Korle Bu for long-term plastic surgery issues sought advice for contractures. This would not have been the case if there had there been physiotherapists and occupational therapists available to support the patients post-injury. This demonstrates the value of these areas of treatment, and emphasises the negative effect that a lack of post-operative care can have in the long term.

BASIC CARE

The author also witnessed the impact that a lack of basic wound dressings can have, such as infections and longer-term consequences, including, sub-optimal wound healing leading to poor scarring, which may have significant functional and psychological consequences.

There is a plastic surgery service in Korle Bu, but it is in high demand since it is the only place in the country that offers this kind of treatment.

Despite being a top teaching hospital, Korle Bu often lacked the most basic amenities, such as running water and electricity. During her placement, the author was often required to pour jugs of water over the surgeons' hands. They would use this water as a preoperative scrub when the water supply was down. At other times, she had to wear a head torch in order to illuminate the operating table when the electricity had cut out and the generator would not start.

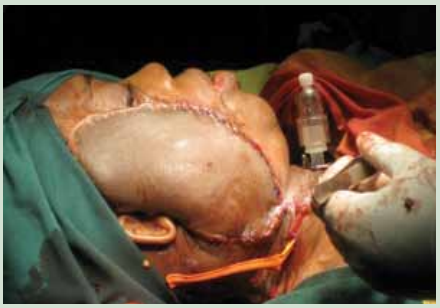

Figure 5 – Young woman undergoing revision surgery for a post-burn contracture. Here the flap has already been transferred from the chest and has been sutured in place.

As previously mentioned, the local community hospital had only three doctors, all of whom were carrying out the duties of accident and emergency consultants, general medics, obstetricians, gynaecology consultants and general surgeons — as well as being on call for every other speciality, almost all of the time.

Also, Ghana is a very religious country and a large proportion of the population are devout Christians. Religion is clearly a very important part of daily life, both in and outside of work, and it was not uncommon for doctors to answer the author's medical queries with phrases such as, 'I will be guided by God' or 'God will find a way'.

CONCLUSION

There is constant groundbreaking research taking place in the developed world, which all clinicians can benefit from. Despite often feeling really quite useless as a junior doctor and listening to people being less than positive about aspects of their work, the author found that experiences such as these are a reminder that small things can make a difference and, by being aware, remaining up to date and taking care to avoid wasting resources, even inexperienced clinicians can make an impact at a basic level.

AUTHOR DETAILS

Rebecca Heath, BSc, MB ChB, MRes is a foundation year two doctor at Wythenshawe Hospital, Manchester

Stuart Enoch, MBBS, MRCSEd, PGCert (Med Sci), MRCS (Eng), Ph.D is the Programme Director at the Doctors Academy, Cardiff and Clinical Lead at the Centre for Studies in Wound Care and Burns, India