Mercy ships: Changing lives
Neel Kothari looks at the volunteer work taking place in West Africa

I t has now been over two years since the Dental Tribune first reported on the work carried out in West Africa by volunteering health-care professionals for the charity Mercy Ships.

Due to extreme levels of poverty in this part of the world the outcomes for those who are sick are very poor and many of the conditions that are considered treatable in developed countries often result in fatalities in the third world.

This article tells the stories of three people who have had life changing operations thanks to the work of the all the volunteers at Mercy Ships and discusses the impact that treatment has had on these patients.

The first case is that of Agbekanme, a 40-year old lady who presented with severe mandibular osteomyelitis as seen in the accompanying photos.

Agbekanme’s case
In West Africa, the severity and extent of osteomyelitis is more widespread and persistent than those seen in the UK. Apart from poor nutrition and a compromised immune system against infection, the lack of basic health care including dental treatment and antibiotic leads to uncontrolled periapical abscesses and subsequent extensive osteomyelitis in West African patients. Acute medullary bone ischemia and irreversible bony necrosis lead to chronic suppurative osteomyelitis.

Agbekanme was not in extreme pain as osteomyelitis itself is not particularly painful given the lack of nerve endings in bone, however she did have mild discomfort due to the mucosal infection.

Specialist Oral and Maxillofacial surgeon Leo Cheng reports that patients with osteomyelitis who remain untreated risk suffering from pathological fracture of the mandible and oro-antral/oro-nasal fistula for maxillary osteomyelitis. Mr Cheng also reports that very often patients presented with facial swelling and pus discharge and some have single and multiple extraoral sinuses. Some patients were tested to be HIV positive, sickle cell crisis, Hepatitis B and actinomycosis.

Although this is a severe case and rarely seen in the UK, an important message for dentists is to be aware of the increased risk of osteomyelitis that is posed by minor oral surgery procedures and bisphosphonate usage. Bisphosphonates adversely affect osteoclasts, which are the cells responsible for bone resorption and thereby act to increase bone density. The literature shows that intravenous bisphosphonate usage carries a higher risk of osteomyelitis compared with oral bisphosphonate usage.

The uses of bisphosphonates include the prevention and treatment of osteoporosis, osteitis deformans (“Paget’s disease of bone”), bone metastasis (with or without hypercalcaemia), multiple myeloma, primary hyperparathyroidism, osteogenesis imperfecta, and other conditions that feature bone fragility.

Guanue’s case (before and after)
The second case is that of two-year-old boy Guanue, who presented with a rare bilateral facial cleft. Thankfully Guanue was lucky enough to receive treatment that managed to close his facial clefts and realign the anatomical structures. In West Africa, people with facial deformities often face a series of social issues that can often see them being ostracised from the societies. Surgeon, Leo Cheng reports that apart from appearance there are a number of functional deficits including poor speech and overflowing of tears due to defective drainage of tears.

In Guanue’s case local fascial skin flaps (interdigitating and transposition flaps) were used to close the clefts and closure of the lower eyelid conjunctiva was also required.

‘For uneducated village chief and witch doctors, babies with clefting deformities are often treated as devil’s children’

Alimou’s case
Our third and final case is that of 22-year old Alimou who presented with a large multicystic ameloblastoma of the mandible.

Alimou Camara is from Conakry, the capital of Guinea in West Africa. At 16 while in the 11th grade, Alimou had to stop school as the tumour was growing in size and becoming an unsightly spectacle. His siblings supported him, but his friends abandoned him. “People laughed at me and rejected me,” he said.

He was unable to work, eat, and began losing weight. Alimou lived with one of his parents because they feel that they are cursed. Some babies with birth deformities are even left in the forest for wild animals.

Alimou was not in extreme pain as osteomyelitis itself is not particularly painful given the lack of nerve endings in bone, however she did have mild discomfort due to the mucosal infection.
married brothers whose kids grew afraid of him. His sister-in-law feared contamination and ordered her children not to drink from the same cup. His life slowly became one of seclusion as he kept himself inside hidden away from a judgmental world.

After eight years his tumour, which hung from his lower jaw, had grown to equal the size of his head. It was a huge strain on his neck. His bottom teeth were embedded and displaced as the mass enlarged. He experienced headaches and a continual watering of his eyes.

There was a constant leaking of pus that seeped from his mouth where the fungating tumour protruded. Alimou would wipe it away, but the smell was overpowering.

For the last several years he has been unable to chew and forced to push the food to the back of his throat to swallow.

Without medical attention, these benign tumours slowly cut off a person’s airway as they grow and in many cases no longer allow the passage of food through the mouth. The eight-hour surgery involved removing the three-kilogram (6.6 pound) tumour, his lower jaw, and all his lower teeth. The tumour was removed and he was fitted with a titanium lower jaw by surgeons Gary Parker and Mark Shrime.

The day finally came when Alimou awoke without a mass on his face for the first time. Handed a small mirror, he examined his face quietly, in awe, as tears slid down his cheeks. He was unable to speak due to the tracheotomy.

Cosmetically, he looked normal again and his face felt much lighter. He was planning to go back to school as his aim was to become an accountant.

On behalf of Dental Tribune I would like to give a special thanks to Mr Leo Cheng for providing the information and photos for these cases.

For those of you who wish to learn more about the work carried out by Mercy Ships, please visit www.mercyships.org.uk for further information.

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