

Objective:

1. How common are childhood cancers in Tanzania? What are the prevalent paediatric cancers and their incidence? How do they differ from the UK?

Tanzania has an estimated population of 41 million people and would expect to see as many as 2,300 new cases of paediatric malignancies per year. An audit completed at Bugando Medical Centre in Mwanza region of Tanzania showed that in 2013 the leading childhood malignancy was Burkitt's lymphoma (40%), Retinoblastoma (16-20%), Wilm's tumour (12-16%), Acute leukaemias (8%), Neuroblastoma (5%), Osteosarcoma (4%), Hepatoblastoma (4%), Brain tumour (1%), Germ cell tumour (1%), and Kaposi's sarcoma (1%). Very similar results were shown by another Paediatric oncology centre at Muhimbili National Hospital in Dar es Salaam where they see majority of childhood cancers.

In contrast, childhood cancer statistics in the UK in 2008-2010 showed that an average of 1,603 children per year were diagnosed with cancer. This indicates that even with a larger population the incidence of childhood malignancies is much less in the UK compared to Tanzania. Incidence of childhood cancers is high in Tanzania. It is probably due to presence of comorbidities such as malaria, tuberculosis, HIV, malnutrition and poverty.

2. How are paediatric oncology services are organised and delivered in Tanzania? How does it differ from the UK?

Currently in Tanzania, there is only one paediatric oncologist Dr Trish Scanlan from Ireland, but newly established Master programme in Paediatric Oncology will change the situation and hopefully by the end of 2015 Tanzania will have at least two its own paediatric oncologists.

The Paediatric Oncology Centre at Muhimbili National Hospital in Dar es Salaam is currently officially the only children's cancer ward in the country and the only one of its kind in East Africa. Worldwide known organisation Children in Crossfire has been working in partnership with the government of Tanzania in the last 4 years. A huge difference in cancer outcome has been made over last few years when international treatment protocols and standards of care have been implemented in Tanzania.

There are a few more centres in Tanzania including Bugando Medical Centre in Mwanza, which despite of lacking of an oncology ward designed particularly for children with cancer and all the resources that the Paediatric Oncology Centre at Muhimbili National Hospital in Dar es Salaam has, still accepts and manages a great number of patients with childhood malignancies.

3. What is Xeroderma Pigmentosa? Management of patients with Xeroderma Pigmentosa

in Tanzania

Xeroderma Pigmentosa (XP) is a rare, autosomal recessive genetic disorder. It is a consequence of a defect in nucleotide excision repair. Therefore patients who are unlucky to be affected by this condition are unable to repair the damage caused by UV light. This inability to repair the UV caused damage, leads to them being particularly sensitive to sunlight, resulting in severe sun-burns even during a short exposure to sun, pigmentation of their skin, and most striking more than 1000-fold increased risk of skin malignancies compared to non-affected population. During my elective at Muhimbili National Hospital in Dar Es Salaam I have seen a great number of children affected by XP. Majority of these children come from Zanzibar island and coastal regions. Commonly children present with eye complications such as keratitis, telangiectasia, opacities and photophobia.

Paediatric oncology department at Muhimbili National Hospital has produced a small guideline/ reminder for the staff and parents on the ward on management of children affected by XP. This guideline includes an essential advice on clothing and sunscreen. To prevent the damage caused by UV light children with XP must wear all the time long sleeved tops and trousers, a peaked hat with a scarf stitched into the back of it to cover child's neck and sunglasses. The highest sunscreen factor (50) should be applied 3-4 times per day on all sun-exposed areas. It's easier said than done, as a small retrospective study done at Muhimbili Hospital showed that majority of children admitted to the oncology ward with XP were not protected from UV light before the first hospital admission.

The guideline also highlights the importance of regular full body examination of children affected by XP. If found, large nodules should be removed surgically, whereas daily application of 5FU cream is advised for smaller nodules. To prevent new lesion formation patients are given Accutane in a dose of 0.2-0.5mg per kg per day.

4. To see variety of adult and paediatric conditions and its presentations across different medical specialties. To practice paediatric and adult clinical examinations.

I have spent six weeks of my medical elective at Muhimbili National Hospital in Dar Es Salaam, Tanzania. I have spent 2 weeks working in Internal Medicine and 4 weeks on paediatric oncology ward. Over the last six weeks I have come across a large number of both adult and paediatric patients with a huge variety of conditions.

My rotation in Internal Medicine was between Gastroenterology and Cardiology Departments. During my placements I took part in ward rounds and helped in clinics. The most common presentation of patients in gastroenterology was with abdominal distension which almost always was due to ascites or organomegaly. Therefore I managed to improve my abdominal examination technique. During my work in cardiology department, I came across many young patients who had all sorts of murmurs present on clinical examinations. As well as practicing my auscultation technique I was fortunate to spend a few days in cardiology clinic where I learnt how to perform an echocardiogram.

During my 4 weeks on paediatric oncology ward I have tried to be as useful as I could and helped during ward rounds and clinics. It was quite challenging experience both physically and emotionally. Physical challenge was mainly due to lack of knowledge of Swahili language and for this reason it was difficult to take a full history from parents and patients. I constantly had to rely on doctors and nurses translations as not many parents spoke English. Luckily all clinical notes are recorded in English. Emotional challenge was mainly due to the number of children presented with cancer at a very late stages. Also the fact that despite some availability of chemotherapy and other non-chemo medications, there is still lack of all necessary medication which are easily available outside Africa. Overall it was a great six weeks and I have learnt a lot during this period and I hope I will be able to come back to Tanzania one day again.