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MEDICINE Charlotte
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I carried out my 5-week elective placement at the Felege Hiwot Regional Hospital in Bahir Dar, Ethiopia. The hospital serves around 25 million people from Bahir Dar and its surrounding regions in North-West Ethiopia. It has departments for major specialties including general medicine, surgery, paediatrics, obstetrics (maternity) and an emergency room. It also houses a branch of the Hamlin Fistula Hospital where I spent a few days in theatre, but the majority of my time was spent working with the staff on the paediatric ward. My objectives were as follows:

1. To compare the common childhood illnesses in Ethiopia to those in the UK, In particular tropical infections and those related to poor hygiene, famine and those for which there are vaccinations or curable treatments available.

2. To compare the allocation of healthcare resources in Ethiopia to those in the UK.

3. To look at the management of HIV in Bahir Dar, particularly in relation to the prevention of vertical transmission and patient education and understanding of the virus.

4. To develop personal, practical and professional skills when working in an unfamiliar environment with limited resources. To think about how this experience may improve my future practice and also what my presence and the experiences I have gained through training in the UK may offer to the staff at the Felege Hiwot Regional Hospital.

The main difference between paediatric medicine in the UK and in Ethiopia is the conditions with which children present. In the UK children tend to present following accidents and injuries, due to chronic conditions such as asthma, epilepsy and cystic fibrosis or with infections such as meningitis. The vast majority of children in Ethiopia present with either infectious and tropical diseases or malnutrition and its complications.

The infections that children present with in Ethiopia are generally ones that either no longer or rarely occur in the UK due to our immunization programme or those that are not endemic to the UK. The infections that I observed during my elective placement included Schistosomiasis, Leishamaniasis, Typhoid, Malaria, Tetanus, Measles, Tuberculosis, TB meningitis and other cases of Meningitis usually due to ACWY strains. Rheumatic fever was also fairly common with a number of children presenting with the infection itself or with heart failure secondary to previous rheumatic fever damaging the heart valves.

The vaccination programme in Ethiopia is much better than I had anticipated with children now receiving active vaccination against Diptheria, Polio, Tetanus, Tuberculosis (BCG), HIB and Hepatitis B. However, despite the improvements in prevention there is still a high prevalence of tropical and infectious diseases. This can be attributed to a number of reasons

1) A vaccine is not yet available
2) Poor access to healthcare facilities, especially to those living in more rural areas who do not have or cannot afford transport to medical centres.
3) A lack of patient/parent education resulting in a child not receiving vaccinations due to a lack of understanding about what they entail and what they are for
4) Lack of antenatal and postnatal care. A number of women choose to have their childen at home and do not attend for antenatal care or follow-up postnatally meaning their children do not receive vaccinations until they attend a healthcare centre for a different purpose.

5) Failure of vaccinations to prevent infection in Bahir Dar and its surrounding regions this is most often likely to be attributed to immunodeficiency due to either HIV or chronic malnutrition.
6) The age of the child a number of children presenting with tropical diseases are either too young and have not yet received their vaccinations or are older children who were born before the vaccination programme was implemented. One such example of this is poliomyelitis. I did not witness any cases on the paediatric ward but I observed a number of people in the community aged around 18 and upwards with signs of previous severe infection.

During my placement a number of children were admitted to the hospital with malnutrition. A common presentation was that of developmental delay. Whilst in the UK developmental delay is largely due to congenital problems, in Ethiopia malnutrition contributes greatly to developmental delay in infancy and early childhood. A second group presented with infections due to immunodeficiency and a further manifestation that I observed both in the hospital and in the community was rickets. Now considered almost obsolete in the UK due to Vitamin D supplementation and education around diet and sunlight exposure, rickets is still very prevalent in Ethiopia and can be observed in older people in the community and in young children presenting to the hospital.
Those at higher risk for developing rickets include:

- Breast-fed infants whose mothers are not exposed to sunlight
- Breast-fed infants who are not exposed to sunlight
- Babies with dark complexions (e.g. brown skin, South African), particularly when breastfed and exposed to little sunlight
- Individuals not consuming cows milk.

Rickets is just one example of a disease that could be prevented with patient education. A study carried out in Ethiopia showed the majority of Ethiopian children are deficient in calcium and that it is the lack of sunlight exposure and vitamin D deficiency that are the causative factors in rickets. This can be largely attributed to a lack of awareness to the importance of sunlight exposure and traditional beliefs particularly in rural areas, such as the practice of not exposing children to sunlight, especially in the 1st 40 days of life. If communication was to be improved and behaviours changed then over time there could be a great reduction in the prevalence of nutritional rickets in Ethiopia.

HIV is still a problem in Ethiopia but the prevalence has, and is continuing to reduce; this is owing to better patient understanding and education and also to improved accessibility to anti-retroviral medication. Screening is now offered on an opt-out basis to all patients who attend medical clinics, the hospital and also to all expectant mothers. One problem that is hindering the progress in 'the fight against HIV' is that cultural beliefs are still such that HIV and other STDs are not generally talked about openly. It is somewhat easier to talk about HIV and AIDS nowadays due to the publicity the epidemic has received, but a number of patients are still declining the test, mainly because there is still considerable stigma attached to a positive diagnosis. As patient education improves more and more patients are consenting to have the test and receiving treatment as necessary. People also understand better about the transmission of HIV and barrier contraception is now widely available with the intent of reducing the number of new cases due to sexual contact. There has also been a reduction in the vertical transmission of HIV owing the fact that women are now more frequently tested early in pregnancy. This means that steps can be taken before, during and after labour to reduce the risk of transmission to children of seropositive mothers

The management on HIV in the general population and in pregnancy is much the same as in the UK with disease progression monitored using CD4 counts, retroviral treatment and prophylactic antiobiotics in the later stages of the disease. The main differences in management are

1) Babies are delivered vaginally and not by caesarian-section in sero-positive mothers
2) Mothers are advised to breast feed up to 6 months of age. This is due to the lack of available clean drinking water a meaning this is deemed safer for the child despite the slight risk of vertical transmission through breastfeeding.

The main problems with the treatment of HIV and with the allocation of healthcare resources in general are location, poverty and a lack of patient education and understanding. But as they are improving so to is the prevalence of HIV and the occurrence of new cases which continues to decline.

While on my elective there were around 30 medical students from some of the local universities on their paediatric rotation and I was fortunate enough to be given the opportunity to observe and take part in some of their teaching sessions. I was surprised about the similarities in their course to ours and also about their knowledge of 'Western medicine'. Despite the limitation of resources here in Ethiopia, the doctors and medical students all had a very good understanding of the investigations and treatments available in developed countries and how they adapt the management of patients according to the healthcare provisions they have available. One such example of this was a patient who presented with cerebral malaria. Although blood films are available these take time to be processed and it was thanks to the skill and knowledge of the doctors and their experience in dealing with malaria that allowed the rapid diagnosis based on the clinical picture that enabled this child to receive the correct treatment and go on to make a full recovery.

My time here in Bahir Dar has been an amazing, unique experience and one that I will never forget. It had given me and I hope too the staff I worked with, skills and knowledge that will help us in our future practices. I have learned fortunate we are to have the resources available to us in the UK and how difficult medicine becomes when these are not available. No doctor would deny their patients the best possible care but through working in an environment where resources are limited I learned how much can be achieved without them. It has become apparent to me that we often take things for granted in the UK and in working somewhere like Bahir Dar I have seen how well the use what is available to them. When you have such limited tests and investigations and range of medication available it is of the upmost importance that every action is thought out thoroughly and that nothing is wasted or used hastily. I have witnessed infections and medical practices that I could otherwise have gone my whole career in the UK without seeing and have learned a great deal. I have thoroughly enjoyed my time here and hope that I have bought as much to the staff and patients that I have worked with as they have given to me.