GENERAL MEDICINE

Elective Report

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What are the top 10 medical conditions present on a general medical/surgical ward in Ethiopia? How does this differ to 'developed nations' and what implication does this have for morbidity and mortality.

Ethiopia, like much of the developing world, bears the heavy burden of infectious disease as a major cause of both morbidity and mortality, in fact, according to the WHO, communicable diseases account for more than 80% of years of life lost (a crude measure of morbidity)1. It is not simply a matter of more ceftriaxone or ciprofloxacin, both are already handed out like smarties (widespread resistance anyone?), it is far more complicated than that; multi-factorial doesn't quite cut it, it's more like a recipe for disaster:

- Take an estimated GDP between $330 and $930 per capita[2,3],
- Add a teaspoon (approximately 1%) of government expenditure allocated to health[3],
- Throw in 1800 doctors (for 83 million people...)[1]
- Pour in 'improved' drinking water, enough for only 40% of the population[3],
- Add to the mix: a minimal education (only 40% of those *going* to school complete their primary schooling)[3], many cases of malnutrition (50% of children under 5 have stunted growth)[2,3] and a sparse scattering of antenatal care (less than 30% of mothers have a single antenatal visit)[4].
- Bake in a moderately hot country, regularly affected by drought and famine and surrounded by politically unstable neighbours.

And voilà, wards full of patients afflicted with malaria, pneumonia, tuberculosis (both pulmonary and extrapulmonary), typhoid fever, diarrhoeal illnesses, tetanus, meningitis, hepatitis and so on. In 2002, infectious diseases accounted for *nine* of the of top-ten reasons for outpatient visits and six of the top-ten reasons for admission to hospital[4]:

No	Reason for admission		Reason for Outpatient visit	
1	*Malaria*	14.80%	*Malaria*	10.40%
2	*Pneumonia*	8.90%	*Helminthiasis*	6.70%
3	*Pulmonary TB*	7.80%	*URTI*	6.50%
4	Injury	6.20%	*LRTI*	5.50%
5	Abortion	3.90%	*Soft tissue infection*	4.60%
6	Obstetric	3.80%	Gastritis/PUD	4.40%
7	Cataracts	2.40%	*Dysentery*	3.50%
8	*Bacilliary Dysentery*	1.60%	*Pulmonary TB*	2.20%
9	*Gastroenteritis and colitis*	1.50%	*STI*	2.20%
10	*Meningitis*	0.90%	*Bronchitis*	1.80%

This is in stark contrast to countries in the developed world, where communicable diseases account for an average of less than 10% of years of life lost and non-communicable diseases account for 70-80%[1]. So what if the major cause of morbidity in Ethiopia is directly related to infectious diseases? It directly correlates to mortality. In 2008 approximately 70%% of mortality in children aged 0-14 was attributable to communicable disease such as diarrhoeal illness, pneumonia, malaria, meningitis and neonatal infections[5]; these are *easily* preventable deaths. But as preventable as they are, little headway is being made.

The cause is primarily two fold: firstly, there is a lack of awareness in the population as to how serious illnesses are; for example between 2000-2008 less than 20% of children under 5 with acute respiratory illnesses were taken to a recognised health-care facility[1]. Secondly, there is a lack of appropriate health-care administered; in the same period, only 25% of under-fives with diarrhoea received oral rehydration therapy and it is estimated that in 2007 just over 25% of individuals (at any age) suffering with TB were successfully diagnosed *and* treated[1]. Then add on the lack of clean water, rife malnutrition, drought and famine and you have a problem which is extremely difficult to tackle.

How are resources allocated, in the context of general medicine and surgery, in a limited environment such as Ethiopia and how does this differ from the UK and other 'developed' nations?

From what I have experienced here, the provision of health services is means-based rather than needs-based, i.e. care is largely provided to those who can afford it, not necessarily those who need it. This would be *relatively* passable in the UK, i.e. a country with a good GDP and environmental and political stability. But Ethiopia is not a developed nation. The fact that the GDP is so low, presents a large problem: the rich-poor divide is greatly magnified, spending on health care services is minimal (therefore man-power, equipment and medications are limited) and training of health care professionals is often substandard. For example, in the local government hospital the only general surgeon was recently unable to perform surgery for almost a whole week because they lacked gauze, temperature is recorded subjectively (if it is recorded at all) as there are no thermometers in the hospital and when there is no electricity, the wards are lit by candles (purchased by those who can afford them) and surgery is performed using a head-torch.

In comparison, Soddo Christian Hospital, a private hospital, is rarely found so desperately in want: gauze is always at hand, there is more than one general surgeon (five in fact), a generator ensures that power-cuts are kept to a minimum, the pharmacy has a reasonable stock and basic observations are written in the patients' notes. And yet...there is only one endoscopic clip applicator, no capability to measure thyroid function, no CT scanner and the hospital is bereft of water at least once a week. From the viewpoint of a westerner, it is difficult to fathom how a hospital with such limitations (even more so the government hospital) could function since we are used to what we need, when we need it, how we need it.

Having been educated in the NHS, where the provision of services is 'free at the point of delivery', a system in which patients pay for each pill, each consultation, their surgical operations and even each hospital meal is completely foreign to me. Patients save up their hard-earned birr for months at a time until they have enough to visit the doctor and to pay for their FBC, urinalysis, CXR and abdominal ultrasound scan and regularly are told that they are beyond help. Means-based service provision here is a catch-22 situation; there isn't sufficient resources in the country to provide needs-based healthcare and yet at the same time the majority of individuals are unable to afford the services they need so the system suffers and mortality and morbidity are unnecessarily high.

Broaden my understanding of/exposure to high disease-burdened populations, with different morbidities compared to the UK and gain experience in different practical skills whilst reflecting on the application of medicine in different cultures.

Working at Soddo Christian Hospital has been a fantastic opportunity for me as I been able to experience the application of medicine under fairly extreme conditions; abject poverty, severely ill patients and greatly limited resources. I have been able to improve my clinical acumen through being exposed to many complex patients and having seen many clinical signs that are rarely as florid in the UK. For example, I have examined patients who have had splenomegaly extending far below the umbillicus, lungs almost destroyed by Tuberculosis, congenital heart defects, fungating soft tissue injuries and massive pleural effusions.

I have also been able to improve and broaden the skills-base I will need when working as a doctor. In surgery I had the opportunity to practice suturing during most operations, thus by the end of the rotation I had learnt to place vertical mattress and subcuticular sutures (both continuous and interrupted), suture fascia effectively and I was able to hand-tie fairly easily. Whilst in the OPD I was able to perform a pleural tap (without anaesthetic mind you...), examine and manage patients following road-traffic accidents and I also had the opportunity to practice ultrasound scanning.

Whilst practising medicine here I have been able to appreciate some of the nuances of Ethiopian culture and how they relate to and impact upon heal-care. For example, how hospitals are perceived in Ethiopian culture is very interesting; for many, they are seen as a place to come and die. For generations, people have tried traditional medicines until the very last moment, then they arrive at hospital as a last ditch attempt when any chance of hope is far gone, often dying shortly after admission. This confers a stigma onto the whole system which merely exacerbates the problem. Another cultural difficulty regards giving blood: the vast majority of Ethiopians absolutely refuse to donate their blood, even for a dying relative. Even many nurses refuse to donate blood to a dying patient. For some unknown reason it is a common belief that giving blood will harm them in some way, or even kill them.

What I have learnt here in the last five-weeks I will keep with me throughout the rest of my medical career and will draw on aspects of care I have observed such as compassion, spirituality and integrity as I work day-to-day as a doctor. Thank you Soddo Christian Hospital.

1405 Words

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