PAUL TSOUKAS describes the challenges faced by patients with HIV/AIDS in west Africa.

THE COST OF LIVING WITH AND DYING OF

AIDS in Tanzania

"The rich are very different from you and me...yes, they have more money."

Ernest Hemingway,
'The Snows of Kilimanjaro'[1]

This quotation from Hemingway's short story rings true near the base of Kilimanjaro. From Kilemma Hospital, Tanzania, near the Kenyan border, you can see what the local Masai call 'the house of God'. The Hospital is supported by the church and the Canada Africa Community Health Alliance, a humanitarian foundation and non-governmental organisation that helps to fight HIV/AIDS and provide healthcare to destitute African communities. On the slopes of Kilimanjaro, the foundation established a HIV/AIDS clinic that treats patients from the surrounding communities. For my first elective in medical school, I had the privilege of witnessing a collage of melancholic yet interesting medicine.

Kaposi's sarcoma

During my second week in Kilemma Hospital, a woman with HIV presented to the clinic for her quarterly check-up complaining of dysphagia and limb pain. She appeared older than her actual age. It was not clear if the signs of premature ageing were due to her disease or were a result of treatment with nucleoside reverse transcriptase inhibitors (NRTIs). NRTIs can cause mitochondrial toxicity and an increase in reactive oxygen species that affect adipocyte differentiation, leading to some of the physical changes noted in premature ageing.[2] These changes include lipoatrophy – the loss of subcutaneous fat of the face – and an increase in abdominal fat. These HIV drugs are used less commonly in the developed world because of this associated lipodystrophy.

After the local medical officer obtained a brief updated history, a visiting North American physician and HIV expert examined the patient. Upon opening her mouth, a Kaposi's sarcoma was seen on the patient's hard palate, the likely source of her complaints. Kaposi's sarcoma frequently presents as purple papules on the

Previous page: Kilemma Hospital with Mount Kilimanjaro obscured by clouds in the background; the pathway to the HIV clinic is called 'the walk of shame' by the villagers.

Staff outside the hospital (from left): Julius, medical officer; Sister Daria, staff physician; and, Sister Clarissa, staff surgeon.

Even with an abundance of natural resources, Tanzania remains poor. Money is needed to properly train healthcare workers, improve infrastructure, and provide free or cheap diagnostic investigations and treatments.

skin or mucosa, but can affect any organ in the body. Commonly, it is found in the gastrointestinal tract and can present with massive oesophageal or intestinal haemorrhage.[3] The physician explained that the mass was large and likely extended down the oesophagus. Such tumours are now rarely seen in the western world because of the early commencement of anti-retroviral treatment. Since the introduction of highly active anti-retroviral treatment (HAART) in 1996 in Europe, North America and Australia, the incidence of AIDS-associated Kaposi's sarcoma has drastically been reduced.[4] In Africa, however, HAART is only commenced at very late stages of HIV infection. As such, a greater number of cases of opportunistic infections and Kaposi's sarcoma are seen, and those with AIDS have a poor prognosis. In such resource-limited areas, not only do patients present late and receive treatment late, but there are also limited long-term treatment options for sarcoma because of financial constraints.

In addition to dysphagia, the woman complained of left leg pain. On examination, the leg had a *peau d'orange* appearance and was warm, features that are consistent with severe oedema. A mass was present in the pelvis and the inguinal nodes were swollen and tender. The physician suggested that the mass may have also been due to a second malignancy – a non-Hodgkin's lymphoma, commonly associated with HIV/AIDS. HIV-associated immune suppression, and in particular the low CD4+ lymphocyte status, may facilitate carcinogenesis. HIV-associated lymphomas are a consequence of an inability to regulate B lymphocytes, leading to uncontrolled B lymphocyte proliferation.[2]

Unfortunately, the required biopsy could not be performed due to the patient's financial status. Despite her young age, there was no other option but to discharge her from the hospital and let her condition progress at home.

Although treatment of malignancies is free in Tanzania, the histopathologic tests required to make a diagnosis are not. Cancer therapy is also only provided in large cities and the patients' families are expected to provide the daily care and support needed during treatments. The major limiting factor in receiving cancer treatment appears to be the cost of travel and housing for the patient and their relatives. This financial burden was beyond the capacity of most of the poor farmers I met at the hospital. In the short story 'The Snows of Kilimanjaro', Hemingway portrays a man who faces death from infection and regrets many of the choices he has made in his life. His resentment of money and of those trying to make him comfortable is in sharp contrast to the attitudes of patients currently admitted to Kilemma Hospital. Despite their hardships and financial constraints, the people and community of Kilemma show a remarkable ability to adapt in the face of adversity.

AIDS in Tanzania

Despite all the hardships I witnessed, I was struck by the ability of most of the impoverished patients to maintain an optimistic outlook. They would often smile and converse happily despite their suffering. I was also surprised to see a profound stigma surrounding HIV/AIDS. HIV patients were clearly identified when they visited the AIDS centre.

Not only did they travel along the solitary pathway to the clinic, dubbed by the villagers 'the walk of shame', but they were easily recognisable because of their distorted physical features as a result of lipodystrophy. Many of the patients attending the clinic also presented with other visible comorbidities such as lymphoma, Kaposi's sarcoma, oral hairy leukoplakia, oral thrush and herpes zoster.

The major limiting factor in receiving cancer treatment appears to be the cost of travel and housing for the patient and their relatives. This financial burden was beyond the capacity of most of the poor farmers at the hospital.

Even with an abundance of natural resources, Tanzania remains poor. Money is needed to properly train healthcare workers, improve infrastructure, and provide free or cheap diagnostic investigations and treatments.

I witnessed a number of patients who were denied standard therapies, not because the staff were oblivious to their existence, but because of the sobering fact that they could not pay for the treatment. In 2006, the WHO identified Tanzania as among the top 20 countries in highest need of antiretroviral treatments.[6] Funds are required to educate the population about HIV/AIDS and to reduce the stigma associated with this disease. Astonishingly, only one in five HIV/AIDS cases is reported. This was reflected in the clinic's predominately female cohort, with many ailing men not willing to be tested.

Many countries, Ireland among them, have contributed to the fight against AIDS in sub-Saharan Africa. In 2006, the White Paper on Irish Aid allocated at least €100 million per year to combat HIV/AIDS and other communicable diseases in developing countries.[7] Despite these efforts, a greater international effort is imperative; Tanzania ranks 148th out of 169 countries based on calculations of the Human Development Index and life expectancies.[8]

The Tanzania Commission for AIDS (TACAIDS) was first established in 2000 by an act of parliament with a mandate to prevent and control the HIV/AIDS epidemic, to provide healthcare and counselling for HIV/AIDS patients and to help HIV/AIDS orphans.[9] In 2003, the WHO estimated that 260,000 people in Tanzania required treatment and set a treatment target of 130,000 people by 2005.

The Government initially declared a national target of 220,000 HIV-infected people on antiretroviral therapy by the end of 2005, but estimates from the Ministry of Health indicated that only 8,300 people were receiving antiretroviral therapy in June 2005. In 2005, Tanzania succeeded in obtaining approximately $500 million USD from the Global Fund to Fight AIDS, Tuberculosis and Malaria for the care and treatment of HIV/AIDS patients.[10] It remains to be seen if these funds will translate into the achievement of future HIV/AIDS treatment targets and a concomitant decrease in the number of HIV-associated comorbidities seen.

References

1. Hemingway E. The Snows of Kilimanjaro. Esquire, August 1936.
2. Caron-Debarle M, Lagathu C, Boccara F, Vigouroux C, Capeau J. HIV-associated lipodystrophy: from fat injury to premature aging. Trends Mol Med. 2010;16(5):218-29.
3. Engels EA. Human immunodeficiency virus infection, aging, and cancer. J Clin Epidemiol. 2001;54(Suppl. 1):S29-S34.
4. Casper C. The increasing burden of HIV-associated malignancies in resource-limited regions. Annu Rev Med. 2010. [Epub ahead of print.]
5. Lopez G, Graza Y. Extensive Kaposi's sarcoma in a HIV positive patient: A case report. The Internet Journal of Infectious Diseases [serial on the internet], 2009; 7 (1). Cited October 11, 2010; Available from: http://www.ispub.com/journal/the_internet_journal_of_infectious_diseases/volume_7_number_1_20/article/extensive_kaposi_s_sarcoma_in_a_hiv_positive_patient_a_case_report.html.
6. World Health Organisation. Progress on Global Access to HIV Antiretroviral Therapy: a report on 3 by 5 and beyond. March 2006.
7. Irish Aid. White Paper on Irish Aid, 2006. Cited December 29, 2010. Available from: http://www.irishaid.gov.ie/whitepaper/.
8. United Nations Developmental Program. Human Development Report 2010 – 20th Anniversary Edition; The Real Wealth of Nations: Pathways to Human Development. November 2010. Cited December 26, 2010. Available from: http://hdr.undp.org/en/reports/global/hdr2010/.
9. Tanzania Commission for AIDS [homepage on the internet]. Dar es Salaam: TACAIDS c2008. Cited October 11, 2010. Available from: http://www.tacaids.go.tz/home.html.
10. World Health Organisation. The United Republic of Tanzania: Summary Country Profile for HIV/AIDS Treatment Scale-Up. December 2005. Cited October 11, 2010. Available from: http://www.who.int/hiv/pub/en/.