Challenges in foot care for people with diabetes in Ghana

Gwen Fernandes

Article points

1. A sustantial proportion of people with diabetes life in developing countries.
2. Management, care and control of diabetes in countries such as Ghana are sub-standard and face unique challenges.
3. Patients attending the Korle-Bu Teaching Hospital for diabetes treatment receive at educational talk and have their blood glucose tested at every visit.
4. Patients often return to the Teaching Hospital, as they cannot afford the oral medication elsewhere.

Key words

- Diabetes care
- Africa
- Ghana
- Treatment standards

Gwen Fernandes is a student at the Wales Centre for Podiatric Studies.

Gwen Fernandes, a student at the Wales Centre for Podiatric Studies, was awarded the 2007 Cosyfeet Study Award. The £1000 grant reward helped to fund her final year research project comparing diabetes pathologies in the developing world with those in the UK. Gwen volunteered at Korle-Bu Teaching Hospital and at the Ridges Hospital in the Greater Accra Region of Ghana. Her subsequent report is featured here.

The International Diabetes Federation (IDF) reports that 245 million people worldwide are living with diabetes and about two-thirds of these people live in developing countries, such as Ghana, in sub-Saharan Africa (IDF, 2006a–c). Diabetes is a major and fast increasing cause of morbidity, premature mortality and disability, and as such is a costly disease bearing individual, psychosocial and economic implications.

In developed countries, such as the UK, the keys to management of people with diabetes are well-organized foot care, good diabetes control and patient education (American Diabetes Association, 2003). Diabetes awareness programmes, leaflets, the Internet, as well as written and verbal advice from healthcare providers facilitate in solidifying a patient's knowledge about the condition. Patient empowerment is also fundamental to successful self-management and improving health.

The Korle-Bu Teaching Hospital experience

The United Nations Educational, Scientific and Cultural Organization (UNESCO) estimated that 25% of Ghanaian adults are illiterate, a statistic that significantly hinders the possibility of patient empowerment (Adjah, 2005; UNESCO, 2002). At Korle-Bu Teaching Hospital, the diabetes clinic holds over 80 000 patient records; and, each day, approximately 160 patients attend the clinic from in and around the catchment area. They assemble before their appointment times for a health education talk which details basic foot care, blood pressure regulation, diet and physical activity. Their blood glucose levels and blood pressures are also assessed. However, a large majority of these patients have returned for more medication simply because they could not afford the initial 3-month oral anti-diabetes medication. This further contributes to the burden on health resources.

Alternative methods of communication are essential to the diabetes awareness campaign. The medium of television has proved a useful tool not only for highlighting the signs and symptoms of diabetes, but also for explaining to the public that the nature of the condition is not shameful or spiritual, but rather a manageable condition where severe complications such as amputations can be avoided. Using the media to spread the news of diabetes and raise its profile is also common practice.

The Traffic Signal Book is an excellent example of improvised health care provision in Ghana. This booklet is a sort of diabetes diary containing a record of a patient's blood glucose levels from each previous visit and if a patient is unable to comprehend numerical values, the traffic-light colours are given as an alternative measurement tool. Green represents the normal spectrum of blood glucose (between 3mmol/L and 6mmol/L), yellow indicates a glucose level of between 6mmol/L and 9mmol/L, and red indicates any value above 10mmol/L. Patients were clearly capable of understanding this monitoring method. HbA_{1c} testing is not routine in Ghana, so this book provides a valuable insight into the patient's history of self-management.

The spiralling number of diabetes diagnoses has been blamed on a variety of factors. One of them is the inappropriate use of traditional medicine, particularly the practice of "healer shopping". In Korle-Bu, traditional medicine proves a bane to medical practitioners as it leads to non-adherence with allopathically prescribed medication and a lack of lifestyle alteration.

The crux of the matter is that people on low incomes are incapable of bearing the cost of prescribed drugs and varied, modified diets and are therefore driven to traditional ethno-medical practitioners out of necessity for medicines, psychosocial and spiritual support. There is a need for cheaper drugs and patient self-help groups. At the Korle-Bu Diabetes Clinic, patients are encouraged to discuss their illnesses with their peers, thereby sharing experiences and breaking the stigma attached to having diabetes; this provides much needed support.

The diabetes awareness campaign in Ghana aims to break various taboos associated with the condition, including dispelling notions of it being contagious or shameful. The main focus in basic health education is conveying the message that diabetes can be successfully managed.

Some of the myths regarding how to 'catch' diabetes include:

- Sexual intercourse with someone with diabetes.
- Stepping on a Juju trap (Juju refers to spirits or ghosts in African lore).
- Being bewitched.

Some believe that diabetes is a "white man's disease", while others believe that obesity is a sign of good health and prosperity, which can derail healthy eating advice. Also, although diabetes is more common among males than females (7.7% versus 5.5%), women comprise the majority of patients at the Korle-Bu Diabetes Clinic. The reasons for this are psychological. Men are less likely to seek medical attention due to the embarrassment of diabetes-related symptoms, such as erectile dysfunction, and also because of their conviction of the superiority of their gender. Understanding the culture of Ghana allows healthcare providers to influence views on the disease and therefore determine healing and prevention criteria.

The Ridge Hospital experience

At the Ridge Hospital, the dressings room is inundated with diabetes ulcers (*Figure 1*), and although the clinic is extremely popular, there is a huge problem with patients who cannot return for daily dressings due to limited financial resources. This, in turn, leads to the development of chronic wounds and increases the risk of infection.

At the Ridge Hospital Diabetes Clinic, patients are given a health talk about

Page points

1. Correct communication of information on diabetes is essential, as awareness of the disease is quite poor in African countries.
2. The Korle-Bu Teaching Hospital uses a booklet to keep track of each patient's blood glucose levels and uses icons and colours to depict possitive or negative levels.
3. Use of traditional medicine and myths surrounding diabetes are serious obstacles in diabetes care.

Page points

1. A high number of foot ulcers are presented at the Ridge Hospital in Ghana, and treatment has a serious impact on the financial resources of the treatment center
2. The Ridge Hospital Diabetes Clinic offers educational talks to patients about diabetes, with particular attention to diet and exercise.
3. The main challenges for diabetes treatment at this instution are diet and wound management.

diabetes, with particular attention focused on diet and physical activity. All signs and symptoms of the condition are defined, as although patients may exhibit only some of these, they could relay useful information to family members or friends who might be undiagnosed. The importance of foot care is highlighted during these discussions.

Perhaps the most common feature of advanced diabetic neuropathy is the loss of sensation in the foot, which can be verified with the use of diabetic filaments of various thicknesses, especially the 10g monofilament, which represents a threshold beyond which risk of a neuropathic ulcer is confirmed (Perry-Coon, 2002). In addition to this, a patient may present with normally painful clinical complications such as onychocryptosis or heloma durum, which have gone unnoticed because of the lack of sensation (Zapf, 1999). This clinical 'beacon' should provoke a healthcare provider to manage the condition and to effectively minimise the risk of serious pathology, such as ulceration, sepsis and the need for amputation (Watkins, 2003). The use of monofilaments as an assessment tool in Ghana, however, is rare because of their scarce availability and the time constraints inflicted on the physician. Clinical assessments in Ghana are mostly conducted on the basis of symptom presentation.

Medical nutrition therapy is an integral component of diabetes management and diabetes self-management. Nutrition and dietetic consideration is an integral component of diabetes management and diabetes self-management. Its benefits are evident in both the short and long term. At the Diet Therapy Clinic, the author was able to learn how information is conveyed to individuals with regards to the correct eating habits and the choice of foods. The use of photos, colour posters and real models of food portions are relied upon, as other resources are scarce. The non-adherent patient poses a frequent challenge to nutrition therapists, as they are seemingly eager to please without realizing that change

Figure 1. Some examples of diabetic foot ulcers at the Ridge Hospital Diabetes Clinic, Ghana.

Page points

1. It is very important that the issues regarding diabetes care are addressed in sub-Saharan countries.
2. Physicians should bear in mind the challenges in the described African patient populations when treating immigrant patients in the UK.

begins with them. In addition, a balanced diet is not financially viable for every patient, and may also conflict with advice from traditional herbalists.

Regarding wound management, the limited financial resources available mean that the use of wound dressings and antiseptics are modulated. A lack of running water hinders the stringent maintenance of good primary and secondary fields. Also, a large proportion of patients are incapable of paying for daily dressings, particularly those who cannot buy into the National Health Insurance policies, creating further dilemmas for practitioners.

Using saline baths is a good practice for maintaining a clean wound and to reduce infection rates, but this is rarely done in Ghana. Only the wealthy can afford a boiler and therefore self-management of the wound for the majority of patients is limited.

Conclusion

The International Diabetes Federation has consistently reported on the dearth of podiatrists on the African continent, and this trip has allowed the author to learn first-hand about how this affects people with diabetes in Ghana. Countries such as the UK have excellent diabetes management systems and if these can be mimicked, diabetes can be better controlled and successfully managed in countries like Ghana.

The author and Dr Beecham, President of the Ghana Diabetes Association.

It is worth noting that although the majority of the sub-Saharan UK immigrant population is well educated, podiatrists in the UK may encounter African patients with cultural backgrounds and beliefs typical of those experienced and held in Ghana. ■

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