



Medicinal plants, diabetes mellitus and urgent needs

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The limitation of available antidiabetic agents in terms of efficacy or safety coupled with the emergence of the disease into global epidemic have encouraged alternative therapy for the management of diabetes more safely and efficiently. Although alternative therapies with antidiabetic activity have been researched and used extensively, however, medical students either do not study these courses or their length of the study is too short. Therefore, complementary and alternative medicine is needed to be widely taught in medical schools and widely practiced in hospitals.

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Diabetes mellitus is a group of metabolic disorders in which the patient has high blood sugar, either because the cells do not respond to the insulin or the pancreas does not produce enough insulin. Diabetes mellitus produces the classical symptoms of polyuria, polydipsia and polyphagia. It can cause various complications such as diabetic ketoacidosis and nonketotic hyperosmolar coma (1). At least one in 20 deaths is attributable to diabetes and related complications. This rate is increasing to at least one in 10 deaths in adults aged 35 to 64 years. This rate might be underestimated because most individuals die from cardiovascular and renal-related complications. The death rate for in South Africa is 85 per 100000. Death rates in other African countries range from 21 to 49 per 100000, in comparison to 18 in the United States of America (2).

Both microvascular (retinopathy and nephropathy) and macrovascular (atherosclerotic) complications account for the majority of deaths. Presence of hypertension is also associated with a four- to five-fold increase in mortality. Various long-term complications including chronic renal failure, diabetic retinopathy or nephropathy and cardiovascular diseases can be controlled by insulin (type 1 diabetes) or by oral medications (type 2 diabetes) such as sulphonylureas, α -glucosidase inhibitors, peroxisome proliferator gamma (PPAR- γ) agonists and biguanides. However, they can cause severe side effects such as hypoglycemia which is dangerous

if severe. Adequate treatment and control of blood pressure and change in lifestyle factors such as stopping smoking and maintaining a healthy body weight are very important in control of diabetes complications. Studies suggest that insulin can cause cardiovascular disease. Furthermore, conventional drugs might not easily accessible to the general population in developing countries due to economic conditions (1).

The limitation of available antidiabetic agents in terms of efficacy or safety coupled with the emergence of the disease into global epidemic have encouraged alternative therapy for the management of diabetes more safely and efficiently.

The use of complementary and alternative medicine (CAM) in the worldwide is increasing. In a study about 5 years ago it was shown that about half of American residents had used an alternative or complementary medical therapy. Total visit to complementary practitioners was about tow times of primary care physicians. In Canada, 75% people with diabetes used non-prescribed supplements and alternative medications (3,4). Most people who use CAM therapies, do not receive any concurrent conventional medical care. Ideal therapies should have a similar degree of efficacy without troublesome. Although alternative therapies with antidiabetic activity have been researched extensively, however, medical students either do not study these courses or their length of the study is too short. Therefore, complementary and alternative medicine is needed to be widely taught in medical schools and widely

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practiced in hospitals.

Traditional herbal medicine is one of CAM which is widely used by many populations to treat a range of different diseases, including diabetes. The World Health Organization also recommended scientific evaluation and encourages the use of medicinal plants for this problem (3). Medicinal-plants may be used as crude extracts or standard, enriched fractions in pharmaceutical preparations. Some plants have also other properties such as antihypertensive, nephroprotective and retinoprotective activities which help better control of complication (5). Therefore, this section of CAM should more urgently be focused and taught in medical schools.

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All authors wrote the paper equally.

Conflict of interests

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Ethical considerations

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