

Diabetes Care in Pakistan - A Real Challenge

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Diabetes Mellitus (DM) is an important cause of mortality and morbidity in the world.¹ More than 285 million people around the world are affected by DM and the prevalence will rise to 438 million by the year 2030.² This is particularly true for low resource countries, where there are limited health resources,³ hence becoming a huge public health problem in these countries.

South Asian population is more predisposed to type 2 DM.⁴ The prevalence of DM has estimated to increase over 151% between year 2000 and 2030 in South Asian region.⁵ There were approximately 6.6 million adult people in Pakistan having DM in 2012⁶ making the tenth largest nation with this problem worldwide.⁷ The prevalence of diabetes is high in Pakistan and patients with this problem are developing complications at a relative younger age here. Cost of treatment of DM is extremely high in Pakistan, where patients have to bear direct and indirect cost out of their own pocket. In 2006 it was found that the mean economic cost borne by each patient with diabetes and his/her family was Rs. 2,070/- for each visit and Rs. 12,420/- annually.¹⁰ Although we are moving towards westernization as a society, still there is some family bonding in the people of Pakistan. These family centered cares along with the patient's own will is important aspect of treatment of DM.¹¹

There are many landmark studies like United Kingdom Prospective Diabetes Study (UKPDS), Action to Control Cardiovascular Risk in Diabetes (ACCORD), ADVANCE trial, Veterans Affairs Diabetes Trial (VADT), Steno-2 study, Diabetes Prevention Program, Kumamoto trial and Diabetes Control and Complications Trial (DCCT) done in the world to observe micro vascular and macro vascular complications of DM and the effect of different medications on diabetic patients.

Pakistan is a low income country with limited resources. DM is affecting both high and low income people. There are different problems in the diagnosis of this disease especially lack of trained endocrinologists in the country. Nearly all of them are practicing in the major cities of the country. Keeping in view the need of this important discipline, College of Physicians and Surgeons of Pakistan (CPSP) has started post graduate training i.e. Fellowship of College of Physicians and Surgeons Pakistan (FCPS) in the specialty of Endocrinology in 2010.

Many diabetic people are living in rural areas of Pakistan. Mortality rates of DM in remote and rural areas is higher (between 10% and 70%) compared to the pa-

tients living in cities even in developed countries like Australia.¹² This is more important in the context of Pakistan where health facilities are limited especially in rural areas. Close monitoring of diabetic patients is important for the long term care including diet, exercise/physical activity, medications, regular self monitoring blood glucose and taking more care of himself/herself in daily life.

DM is an important disease as it affects nearly all the organs of the body directly or indirectly. In the medical school, students learn about the basic pathophysiology. When they enter in the post graduate program, especially of Medicine, they learn more about the problem. However, when they are trained in Endocrinology, doctors get more chances to observe closely the complications of this deadly disease.

Training of Family Medicine doctors with relevance to DM is very important, as these physicians treat diabetic patients in both urban and rural areas of the country. There are certain problems which should be addressed at the initial stage. Therefore most is the early diagnosis of DM. This is possible if the doctors should have high suspicion of DM in high risk patients having no signs and symptoms. After proper diagnosis, the next step is the management of the disease through proper medications, diet and physical activity. Regular follow up of these patients is also important to adjust the dose of the medication through self monitoring of blood glucose.

Keeping in view of increasing burden of this problem, there should be strong communication system among these doctors. A net work of family physicians trained by endocrinologist to reach an early diagnosis and management of diabetes. However they must referred complicated cases like diabetic ketoacidosis after initial appropriate management to any major hospital. Media should also play its role by educating the people that DM is a disease and taboo related to insulin use should be changed.

There are many suggestions to improve the care of DM in Pakistan. Diabetic emergencies after initial resuscitation/ management should be referred to tertiary care hospitals. Brittle diabetes and patients with early complications should be referred for further management to prevent the progress of complications. The government should be involved to give free insulin to type 1 DM patients. Early screening for complications like retinopathy, nephropathy and neuropathy should be done in all diabetic patients to prevent complications and more centres in the country should be estab-

lished for the training in Endocrinology to serve people at district level hospitals.

To conclude, it is important that DM should be diagnosed and treated early in order to prevent the future complications in Pakistan where the burden of this problem is increasing day by day. Family physicians should undergo regular training related to DM to provide better medical and psychological management to these patients.

REFERENCES

1. Klein R. Hyperglycemia and microvascular and macrovascular disease in diabetes. *Diabetes Care* 1995; 18:258–68.
2. Shaw JE, Sicree RA, Zimmet PZ: Global estimates of the prevalence of diabetes for 2010 and 2030. *Diabetes Res Clin Pract* 2010; 87:4–14.
3. Wild S, Roglic G, Green A, Sicree R, King H: Global Prevalence of Diabetes. *Diabetes Care* 2004; 27:1047–53.
4. Mather HM, Keen H: The Southall Diabetes Survey: prevalence of known diabetes in Asians and Europeans. *Br Med J (Clin Res Ed)* 1985; 291:1081–4.
5. Jayawardena R, Ranasinghe P, Byrne NM, Soares MJ, Katulanda P, Hills AP. Prevalence and trends of the diabetes epidemic in South Asia: a systematic review and meta-analysis. *BMC Public Health* 2012; 12:380.
6. Kalra S, Peyrot M, Skovlund S. Second diabetes attitudes, wishes and needs (DAWN2) study: relevance to Pakistan. *J Pak Med Assoc* 2013; 63:1218-9.
7. International Diabetes Federation. *Diabetes Atlas 5th Edition (2012)* [Internet]. Available from <http://www.idf.org/diabetesatlas/5e/Update2012>.
8. Ahmed A, Jabbar A, Zuberi L, Islam M, Shamim K. Diabetes related knowledge among residents and nurses: a multicenter study in Karachi, Pakistan. *BMC Endocr Disord* 2012; 12:18.
9. Shera AS, Jawad F, Maqsood A. Prevalence of diabetes in Pakistan. *Diabetes Res Clin Pract* 2007; 76:219-22.
10. Khowaja LA, Khuwaja AK, Cosgrove P. Cost of diabetes care in out-patient clinics of Karachi, Pakistan. *BMC Health Serv Res* 2007; 21:189.
11. Kalra S, Megallaa MH, Jawad F. Perspectives on patient-centred care in diabetology. *J Midlife Health* 2012; 3:93-6.
12. Australian Institute of Health and Welfare: *Rural, regional and remote health: a study on mortality (2nd Edition)*. In Rural health series no 8 Cat no PHE 95. 2nd edition. Canberra: AIHW; 2007.



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