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EDITORIAL

Call for Prevention and Proper Management of Diabetic Kidney Disease

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The increase in the prevalence of diabetes mellitus is greater in developing than developed countries.[1] While the prevalence of type 2 diabetes has doubled in developed countries, it has had a 3-5 fold increase in China, Indonesia, India, Thailand and Korea.[2] The Tehran Lipid and Glucose Study, a population based study conducted in the capital city of Iran, a country in nutrition transition, documented a 1% yearly rise in the prevalence of type 2 diabetes in recent years.[3]

Despite the diabetes epidemic this century, the remarkable lack of awareness among populations about diabetes continues,[4] with almost half of these diabetic individuals being unaware of their condition.[5] The combination of the increasing prevalence of diabetes and the unawareness of the disease is accompanied by a rise in the serious complications of diabetes, in particular in the developing countries, where strategies for prevention, screening and management strategies are inadequate.

One of the major complications of diabetes is diabetic kidney disease. Diabetes is the major cause, of approximately 20-40% of end stage renal failure worldwide.[6] During a 15-year follow-up, 40% of type 2 diabetics developed microalbuminuria[8] and there is a 2-3% rate of development of kidney failure in newly diagnosed type 2 diabetes with normal kidney function.[9] It is of interest that the risk of metabolic syndrome for developing chronic kidney disease escalates in the presence of diabetes and hypertension.[10] Diabetic nephropathy-related albuminura and reduced glomerular filtration rate are independent risk factors for cardiovascular events and death[11] and moderate chronic kidney disease is a major risk factor for development of ischemic heart disease.[12] Therefore, early detection of diabetic kidney disease and aggressive coronary heart disease risk modification in patients with moderate chronic kidney disease is urgently warranted.

The International Diabetes Federation together with the International Society of Nephrology and the International Federation of Kidney Foundations have proclaimed "World Kidney Day", celebrated since 2006 on the second Thursday of March each year; the 2010 global campaign, while focusing on diabetes, highlights the importance of diabetic kidney disease and underscores worldwide action for prevention of type 2 diabetes through massive lifestyle changes to raise patient awareness regarding diabetes and its complications, in particular kidney disease. It also recommends increased screening for early diabetic kidney disease, and

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emphasizes treatment strategies and promote research for development of new therapies.[13]

Diabetic kidney disease, although a global problem, requires mobilized action at the local level. Mass education, increasing awareness of those at risk of developing diabetes, screening, education and management of diabetic patients all involve not only the ministry of health of each country, but many governmental and non-governmental organizations, which must prioritize the issue as a health strategy for years to come. It is time to act and to act urgently.

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References

1. King H, Aubert RE, Herman WH. Global burden of diabetes, 1995-2025: prevalence, numerical estimates, and projections. Diabetes Care 1998; 21: 1414-31.
2. Yoon KH, Lee JH, Kim JW, Cho JH, Choi YH, Ko SH, et al. Epidemic obesity and type 2 diabetes in Asia. Lancet 2006; 368: 1681-8.
3. Harati H, Hadaegh F, Saadat N, Azizi F. Population-based incidence of type 2 diabetes and its associated risk factors: results from a six-year cohort study in Iran. BMC Public Health 2009; 9: 186.
4. Dunstan DW, Zimmet PZ, Welborn TA, De Courten MP, Cameron AJ, Sicree RA, et al. The rising prevalence of diabetes and impaired glucose tolerance: the Australian Diabetes, Obesity and Lifestyle Study. Diabetes Care 2002; 25: 829-34.
5. Azizi F, Guoya MM, Vazirian P, Dolatshati P, Habbibian S. Screening for type 2 diabetes in the Iranian national programme: a preliminary report. East Mediterr Health J 2003; 9: 1122-7.
6. National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases. International comparisons, in 2007 Annual Data Report: Atlas of Chronic kidney Disease and End-Stage Renal Disease in the United States. 2007, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases. Bethesda. P. 239-54.
7. Reutens AT, Prentice L, Atkins R. The Epidemiology of Diabetic Kidney Disease. In: Ekoé JM, Zimmet P, Williams R, Eitors. The epidemiology of diabetes mellitus. 2nd ed. Chichester: John Wile & Sons Ltd 2008. p. 499-518.
8. Retnakaran R, Cull CA, Thorne KI, Adler AI, Holman RR; UKPDS Study Group.Risk factors for renal dysfunction in type 2 diabetes: UK Prospective Diabetes Study 74. Diabetes 2006; 55: 1832-9.
9. Parving HH, Lewis JB, Ravid M, Remuzzi G, Hunsicker LG; DEMAND investigators. Prevalence and risk factors for microalbuminuria in a referred cohort of type II diabetic patients: a global perspective. Kidney Int 2006; 69: 2057-63.
10. Rashidi A, Ghanbarian A, Azizi F. Are patients who have metabolic syndrome withour diabetes at risk for developing chronic kidney disease? Evidence based on data from a large cohort screening population. Clin J Am Soc Nephrol 2007; 2: 976-83.
11. Ninomiya T, Perkovic V, de Galan BE, Zoungas S, Pillai A, Jardine M, et al; Advance Collaborative Group. Albuminuria and kidney function independently predict cardiovascular and renal outcomes in diabetes. J Am Soc Nephrol 2009; 20: 1813-21.
12. Rashidi A, Ghanbarian A, Azizi F, Adler DS. Is chronic kidney disease comparable to diabetes as a coronary artery diseae risk factor? South Med J 2007; 100: 20-6.
13. Atkins RC, Zimmet P. Diabetic kidney disease: Act now or pay later. Iran J Kidney Dis 2010; 4: 9-12.