Diabetes mellitus versus diabetes with obesity

A K Mandal, L M Hiebert and S Nasr
University of Florida, USA
University of Saskatchewan, Canada
Mayo College of Medicine, USA

Obesity and Type 2 Diabetes (T2D) go hand in hand. Massive weight reduction following bariatric surgery is associated with remission of T2D. A relevant question is if obesity is a prodrome of T2D or metabolic syndrome? Percutaneous kidney biopsies were done to answer that question. Kidney biopsies were done after obtaining informed consent from two adult males: white male (WM), 54 years old, weighing 354 lbs; African American male (AAM), 45 years old weighing 309 lbs. Both have severe diabetes for 10 years or more with 2 hour post prandial glucose (2hPPG) greater than 200 mg/dl (> 11.1 mmol/L), and HbA1c ranging from 7-9.3% in WM and 10-13% in AAM. Both have been treated with massive doses of insulin with no glycemic control. AAM has 2+ proteinuria and reduced kidney function. Immediately after bariatric surgery in WM, normoglycemia was noted associated with weight loss of 116 lbs. After 2 years of sustained normoglycemia, average HbA1c is 5.4%, 2hPPG is <100 mg/dl (5.5 mmol/L). Kidney biopsy showed no evidence of diabetic nephropathy and renal function is normal. In AAM, while waiting for bariatric surgery, a kidney biopsy showed glomerulomegaly but no diabetic nephropathy. In conclusion, this kidney biopsy study doesn't support association of obesity with T2D. Prompt remission of T2D, following bariatric surgery and no histologic evidence of diabetic nephropathy suggests that T2D in obese individuals is a surrogate of the metabolic syndrome.

Biography

A K Mandal is a native of India and a naturalized citizen of the United State of America. He is board certified in Internal Medicine and Nephrology (not yet recertified in Nephrology). He is published author/editor of 12 books and more than 100 articles on research in diabetes and kidney disease. He is a two-time Fulbright Scholar and a visiting professor of 23 countries which permitted lectures on diabetes, high blood pressure and kidney disease on five continents of the world. His astute knowledge and total dedication help patients get better and to live a good life. His convictions are that office patients come first. At home children comes first. Roses are his love; hence rose gardening is his hobby.

amandal@med-spec.com