Comments on "Clinical Gallbladder Disease in NIDDM Subjects"

The study by Steven M. Haffner (1) gives a very surprising result indicating that fasting glucose concentration is inversely associated with gallbladder disease.

This result should not be surprising, however, because the gallbladder disease status was determined by a home interview and was considered to be present if the participant responded "yes" to the question, "Have you ever had your gallbladder removed?" Gallbladder disease was also considered to be present if participants had a previous history of stones on X-ray or ultrasound. I would guess that many patients in the study already had a cholecystectomy. Diabetic patients often have enlargement of their gallbladder (2–5) and decreased gallbladder emptying (6), which most likely could dispose them to chronic gallbladder infection.

In my experience, it is not rare for a patient's hyperglycemia to improve markedly after removal of a chronically infected gallbladder. It is my clinical impression that many diabetic patients have a mild, chronic gallbladder infection complicating the management of their diabetes, and many of those patients do not necessarily have gallstones. Further studies are needed to establish the importance of chronic gallbladder disease in diabetes.

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Macrovascular Disease Is Not That Uncommon in Fibrocalculous Pancreatic Diabetes

Fibrocalculous pancreatic diabetes (FCPD) is now a widely recognized subset of malnutrition-related diabetes mellitus, the other being protein-deficient diabetes mellitus (PDDM). FCPD is associated with a chronic, often calculous, pancreatitis of uncertain etiology and is prevalent mainly in certain zones of some tropical developing countries including some of the more southern states of India. We were the first to document its prevalence and characteristics in the eastern Indian state of West Bengal (1). The 28 FCPD patients we came across were consistently young (<30 years of age) with female preponderance. Though they required moderately high doses of insulin from the beginning, they did not develop acetonuria or ketosis despite long interruptions of 8–12 months in insulin therapy. All had suggestive pancreatic ultrasonographic abnormalities, and most had pancreatic calculi in abdominal radiographs and steatorrhoea with normal D-xylose excretion, which was subsequently reduced by pancreatic lipase supplementation. Subsequent to this report, we affirmed the pancreatic involvement with endoscopic retrograde cholangiopancreatography in those without radiologically detectable pancreatic calculi. Later we reported frequent human leukocyte antigen (HLA) DR3 and infrequent HLA DR2 associations in our FCPD patients and raised the possibility of their comprising a subset of chronic calcific pancreatitis of tropics with genetic predisposition to type I diabetes (2).

During these studies we were struck by the absence of macrovascular disease in our FCPD subjects, as assessed clinically and by resting ECG, despite their having long durations of diabetes (8–12 years).

This appeared to conform to the general impression that macrovascular disease is rare in FCPD except coronary heart disease in the occasional elderly patient (3). However, hyperglycemia has been implicated as an independent coronary risk factor (4), and we decided to determine with more certainty the macrovascular status of our patients with treadmill testing, Doppler echocardiography, and Doppler ultrasonographic studies of limb vessels particularly as no such data appeared to be available. We have been able to muster reevaluated data on 24 of our 28 subjects whose other characteristics have already been mentioned. Among the four patients not reevaluated, two died and two were lost to follow-up. The reassessed patients were young (14–33 years of age) with fairly long durations of diabetes (7–12 years). Their serum lipid profiles were quite acceptable and body mass index was low (12.8–19.2 kg/m^2). None of them smoked or were hypertensive, and they appeared to lack any atherosclerotic risk factor besides diabetes.

Despite this we found evidence of subclinical peripheral vascular disease

(PVD) in 5 (20.8%) patients. This was in the form of sclerotic patches in 2-D echo studies of lower limb vessels in three patients and reduced ankle arm indexes (<0.94 at rest and <0.73 postexercise) with reduced diastolic systolic flow ratios (<0.3) in all. These patients with subclinical PVD were young (32 years of age) with long durations of diabetes (8–11 years) as assessed by the postexercise ECG and Doppler echocardiography without cardiac disease.

We attempted a preliminary assessment of the prevalence of PVD in FCPD by comparing incidences of PVD in FCPD patients with those of PDDM, type I, and type II diabetic patients with more or less similar ages and durations of diabetes who were similarly investigated. This control group consisted of 10 younger (40 years of age) type II diabetic patients, 12 type I diabetic patients 15–26 years of age, and 11 PDDM patients 18–28 years of age identified as per Bajaj's criteria (5). Their durations of diabetes varied from 7 to 10 years. Incidences of PVD were 16.67, 20, and 9.09% in type I, type II, and PDDM subjects, respectively. Thus, the incidence of PVD in FCPD is not dissimilar to the primary diabetic subjects (type I and type II) but higher than that of PDDM.

In view of peripheral arterial disease reportedly enhancing risk of acute cardiovascular events in diabetic patients (6), FCPD patients irrespective of their lower age and absence of nondiabetic atherosclerotic risk factors, should receive as much cardiovascular surveillance as the major diabetic subsets (type I and type II). There appears to be a case for reconsidering the view that FCPD patients, except for the infrequent elderly ones, are much less prone to macrovascular complications than the usually encountered type I and type II diabetic patients.

It would be of great interest to have our observations compared with those derived from similar studies conducted in centers caring for FCPD and PDDM patients in addition to the usual type I and type II diabetic patients.

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