Prevalence of Diabetes Mellitus in Rural Saudi Arabia
A Reply

We fully agree with the analysis that socioeconomic development has a direct influence on the results of studies on the epidemiology of diabetes mellitus. However, we think Dr. Duarte will agree that socioeconomic development alone does not provide an adequate explanation of the whole picture. The ethnic inter-population differences (even after adjustment for obesity) (1–4) and the high prevalence rates of non-insulin-dependent diabetes mellitus in certain populations (5,6) point to a probable susceptibility factor(s) that still needs clarification.

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REFERENCES

1. Kawate R, Yamakido M, Nishimoto Y, Bennett PH, Hamman RF, Knowler WC: Diabetes mellitus and its vascular complications in Japanese migrants on the island of Hawaii. *Diabetes Care* 2:161–70, 1979
2. Jackson WPU: Diabetes and related variables in South Africa: comparisons from population studies. *Postgrad Med J* 48:391–98, 1972
3. Jackson WPU: Epidemiology of diabetes in South Africa. *Adv Metab Disord* 9:111–46, 1978
4. Haffner SM, Stern MP, Hazuda HP, Rosenthal M, Knapp JA, Malina RM: Role of obesity and fat distribution in non-insulin-dependent diabetes mellitus in Mexican Americans and non-Hispanic Whites. *Diabetes Care* 9:153–61, 1986
5. Gohdes DM: Diabetes in American Indians: a growing problem. *Diabetes Care* 9:609–13, 1986
6. Zimmet P, Taft P, Guinea A, Guthrie W, Thoma K: The high prevalence of diabetes mellitus on a Central Pacific island. *Diabetologia* 111–15, 1977

Cyclosporin A in Treatment of New-Onset Type I Diabetes Mellitus

The role of cyclosporin and other immunosuppressive agents in the treatment of new-onset cases of type I (insulin-dependent) diabetes mellitus has been recently summarized (1); our study was undertaken to confirm earlier findings. Because the drug is both expensive and potentially toxic, a limited 4-mo treatment period was tested. Forty-three children, adolescents, and young adults aged 8–36 yr enrolled within 6 wk of initial presentation and were randomly assigned either to a group that received an average of 8.2 mg · kg^{-1} · day^{-1} cyclosporin A (CsA) for 4 mo or to a control group. The former group was monitored, at first weekly and then at longer intervals up to monthly, with total blood counts, liver-function tests, serum creatinine, and trough whole-blood CsA levels. T-lymphocyte subsets and levels of serum islet cell antibodies (ICAs) were determined at the beginning of the study and after 4 and 12 mo.

At 4 and 12 mo, there were no significant differences between the two groups in terms of insulin dose per kilogram body weight, glycosylated hemoglobin levels, serum C-peptide response to glucagon, ICA titers, or activated T-lymphocytes or their subsets. The mean (±SD) whole-blood trough CsA level was 366 ± 102 mg/dl.

At 4 mo after the clinical onset of the disease, 16 of 20 control patients and 16 of 20 in the treatment group had glucagon-stimulated 6-min serum C-peptide elevations >0.3 pmol/ml. At 12 mo, there were 7 such patients in each group.

No important complications from the administration of CsA were encountered. One subject had significant hair loss, which cleared with reduction of the dose. Four patients had significant rises in bilirubin levels to >1.5 mg/dl. These levels also responded to lowering the dose, as did leukopenia in one case. Mild transient hypertrichosis was common, but gingivitis and elevations of serum creatinine were not encountered.

CsA clearly needs to be administered for at least 6 mo to have an effect on insulin needs, and the risks of toxicity and especially of renal damage may transcend any advantage of insulin independence in young diabetic patients. There is promise nonetheless that future controlled trials of other immunosuppressives (e.g., anti-T-lymphocyte monoclonal antibodies), of free-radical scavengers, or combinations of the two will provide a greater benefit with less risk.

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REFERENCE

1. Rubenstein AH, Pyke D: Immunosuppression in the treatment of insulin dependent (type 1) diabetes. *Lancet* 1:436–37, 1987