TABLE 1
Age of mother at the time of birth of diabetic child

Maternal age (yr)	Observed (Fi)	Expected (Fi)	Fi − Fi	$\frac{(Fi-Fi)^2}{Fi}$
15–19	9	16.30	−7.3	3.27
20–24	53	82.20	−29.2	10.37
25–29	84	81.19	+2.81	0.10
30–34	63	42.74	+20.26	9.60
35–39	27	15.36	+11.64	8.82
40–45	5	3.90	+1.1	0.31
>45	1	0.31	+0.7	1.54
Total	242	242.00	$\chi^2 = 34.01$ ($P < 0.005$)	

other Centers.[1] We were thereafter prompted to review the cases in our Clinic.

During the period from January 1972 through December 1982, we have seen 242 children affected by strictly insulin-dependent, ketosis-prone diabetes mellitus. Mean age at onset of disease was 7.14 ± 6 yr. All the patients came from Turin City and surrounding areas (Northern Italy). Control data for expected maternal age of women from our region at birth of first and subsequent live-born children were derived from the National Institute of Statistics (ISTAT) reports for 1979.[2] No significant change was noted from 1960 through 1978 in median maternal age at birth of first and subsequent children. We used χ^2 analysis to determine whether the distribution of maternal age at birth of a diabetic child differed from that in the general population.[3]

As shown in Table 1, we too found a lower incidence of affected children born to younger mothers and a significant excess among the offspring of mothers over 30 yr of age ($\chi^2 = 34.01$; $P < 0.005$). Moreover, the sibling order seems to be related to an increased incidence of IDDM. In fact, in our population 25 of 242 families (10.3%) had more than three children and, among them, the diabetic child was last-born in 23 families.

Our data support the observation of Dr. Flood concerning a higher incidence of IDDM in children of older mothers and corroborate the hypothesis of a population subset with greater IDDM risk. A survey of these patients should include, besides studies of HLA haplotypes and detection of islet cell antibodies (ICA), an evaluation of the clinical course and incidence of microvascular complications.

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Increased Glycosylated Proteins in Opiate Addicts

The occurrence of a nonenzymatic glycosylation of proteins in diabetes has been recently described.[1] We have shown impaired glucose tolerance and increased HbA_1 levels[2] in opiate addicts probably due to morphine addiction.

Consequently we measured blood glucose, HbA_1, and glycosylated proteins in 20 male addicts [age: 23 ± 4.2 yr; weight: 68.4 ± 4.5 kg (mean ± SD)] and in 20 healthy male controls matched for age (24 ± 3.6 yr) and weight (69 ± 3.87 kg). Glycosylated serum proteins were measured, in duplicate, by the Kennedy method.[1] HbA_1 and glycosylated protein levels were increased in addicts versus controls (HbA_1: 7.1 ± 0.15 versus 6.2 ± 0.18%, $P < 0.001$; glycosylated proteins 0.66 ± 0.09 versus 0.61 ± 0.2 nmol HMF/mg protein, $P < 0.02$).

No correlation has been found between HbA_1 and glycosylated protein levels. Our data demonstrate the presence of increased nonenzymatic glycosylation of proteins in addicts. Our other studies confirm that these subjects have other changes very similar to patients with diabetes,[3,4] including increased platelet aggregation[5] and fibrinogen levels,[6] polycythemia and increased reticulocyte counts,[7] and decreased HDL and apolipoprotein A levels.[8]

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More on Patient Education: Use of Microcomputers

Recently Korhonen et al. concluded that to achieve long-term improvements in diabetic control, educational programs must lead to changes in attitudes and motivation.[1] In order to motivate patients, the educational experience must be flexible and responsive to their needs and abilities. We must appreciate that resistance to learning demands alternative methods of teaching.[2] Microcomputers can provide an alternate approach to patient education; an approach particularly well suited to the younger patient.

Microcomputers can be used as an effective adjunct in teaching the principles of diabetic control. A micro can provide visual reinforcement in the office as well as the home. In conjunction with the clinician, it encourages the patient to actively participate in managing his or her diabetes in an entertaining and informative way.

At present micros are underutilized in patient education despite their low cost and widespread availability. Soon, many new computers and programs will be developed for personal use, including programs that will offer diabetes instructions.[3] This vital medium has the potential of evolving into a valuable asset in patient education. Clinicians are encouraged to use this resource in motivating and educating their patients.

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