Insulin dependent diabetes mellitus: incidence in childhood in Belgrade 1982-92

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A retrospective technique was used to register all newly diagnosed cases of insulin dependent diabetes mellitus (IDDM) in Belgrade children 0–14 years of age, between 1982 and 1992. Two independent sources of data were used: patients’ records from hospitals where the disease was diagnosed (according to WHO criteria) and the population based register. To establish the completeness of ascertainment the capture/recapture method was used.7 For calculation of yearly incidence rates, the population denominator data were obtained from the 1981 and 1991 national census data with interpolation. The incidence was standardised by the direct method using the world population as the standard. The 95% confidence intervals were calculated assuming a Poisson distribution. The significance of seasonal variation was analysed by an ordinary χ² test.

Results: The ascertainment probability for the whole study period was 90-05%, ranging from 74-04% to 98-74%. Between 1982 and 1992, the mean, annual, age adjusted incidence rates of IDDM (per 100000) were 7-3 for boys, 8-1 for girls, and 7-7 for both sexes. The highest incidence was in the age group 10–14 years. The overall male:female ratio was 0-90 (table).

There was a year to year fluctuation in both crude incidence and estimated incidence (crude rate/completeness of ascertainment), with two peaks, one in 1985 and the other surrounding the year 1991.

The largest numbers of new cases were identified in the months of January and September, and the smallest numbers in April, May, and June. The seasonal pattern in the total material was significantly different from a uniform distribution of new cases throughout the year (p<0.01). The mean number of new cases in the winter months, December, January and February, was significantly different from the yearly mean (p<0.05).
diabetes has been observed both in Europe and elsewhere.\(^4\) Our study period of 11 years was too short to provide an accurate analysis of any time trend in incidence. In fact, there seemed to be a non-linear, epidemic type variation, with a possible outbreak in 1985 and around the year 1991. It has recently been pointed out that IDDM is a rather atypical chronic disease in that its “epidemics” are evident and relatively common.\(^5\)

In our study a typical seasonal variation in incidence was established.

Since the pathological process leading to IDDM may start years before the clinical onset, the epidemic variation, as well as the seasonal variation for hypertension and heart conditions over the previous two weeks, and, current weight loss diet or any other special diet. We checked for the presence of a dose-response relationship by carrying out a weighted linear regression analysis of the ORs.

**Results:** The crude and adjusted ORs for obesity for different types of alcoholic drinks and at different levels of consumption in Spanish men and women are shown in the table. For total alcohol intake, the adjusted OR in men increases between occasional drinkers and excessive drinkers, from 0·92 to 1·17. This positive tendency was statistically significant (\(p = 0·011\)). In women, the observed effect was just the reverse, ORs < 1 that decreased significantly as the amount of alcohol consumption rose were seen. This trend was also statistically significant (\(p = 0·001\)).

With regard to wine, the ORs tend to be > 1, especially in heavy and excessive drinkers, suggesting a positive association. The most important association for wine consumption and obesity was observed in women; their adjusted OR was substantial (1·75) in excessive drinkers and statistically significant in heavy drinkers (1·46, 95% CI = 1·05, 2·03) who showed a dose-response relationship that was close to statistical significance (\(p = 0·066\)).

**Discussion:** This paper describes the relationship between regular alcohol consumption and obesity in the Spanish population. Findings for men and women are opposed — that is, there is a weak positive association in men and a weak negative association in women. Other studies on the same subject have provided similar results.\(^7\) The negative relationship detected in women is one of...