PROGNOSIS

Child and maternal psychological status was predictive of psychiatric disorders in youths with IDDM

Kovacs M, Goldston D, Obrosky DS, et al. *Psychiatric disorders in youths with IDDM: rates and risk factors*. *Diabetes Care* 1997 Jan;20:36-44.

Objective

To determine the incidence and predictors of psychiatric disorders after the diagnosis of insulin dependent diabetes mellitus (IDDM) in youths.

Design

Inception cohort followed up for a median of 9 years.

Setting

Diabetes endocrinology inpatient service, Children's Hospital of Pittsburgh, Pittsburgh, Pennsylvania, USA.

Patients

92 patients between 8 and 13 years of age (mean age 11 y, 53% girls) with newly diagnosed IDDM and no other systemic medical disorder or mental retardation were included.

Assessment of prognostic factors

At the initial diagnosis of IDDM and during follow up, the parent and then the child were interviewed to determine the child's adjustment. Parents were also interviewed about themselves by a clinician. Admittance to hospital for IDDM related problems was verified using medical records.

Main outcome measure

Psychiatric diagnosis.

Main results

39 patients (42%) developed ≥ 1 episode of psychiatric disorder during follow up. These psychiatric disorders were grouped into the broad categories of depressive, anxiety, and behaviour (conduct/substance use) disorders. Using Kaplan-Meier esti-

mates of specific disorders, 48% of patients followed up for 10 years would develop secondary psychiatric disorder. Major depressive disorder occurred at a higher rate (28%) than other diagnoses. Childhood conduct disorder (14%) and adult generalised anxiety disorder (12%) also occurred at comparatively high rates. The first year after diagnosis of IDDM was associated with the highest incidence of a psychiatric disorder in general and with depressive and anxiety disorders in particular (hazard rates 0.165, 0.103, and 0.056, respectively). General maternal psychopathology ([hazard ratio [HR] 2.11, 95% CI 1.02 to 4.35]*, $p=0.054$) was a predictor for any psychiatric disorder in the patient. Maternal depression ([HR 2.63, CI 1.12 to 6.19]*, $p=0.026$) and psychiatric disorder in the patient since IDDM but before the onset of depression ([HR 3.22, CI 1.18 to 8.81]*, $p=0.034$) were predictive of patient depression. Psychiatric disorder after diagnosis of IDDM but before the onset of behaviour disorder ([HR 4.06, CI 1.25 to 13.12]*, $p=0.022$) was predictive of behaviour disorder.

Conclusions

Psychological status of young patients and their mothers was predictive of psychiatric disorders in these youths with insulin dependent diabetes mellitus. The high risk period for the development of psychiatric disorder was in the first year after diagnosis of insulin dependent diabetes mellitus.

*Numbers calculated from data in article.

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For article reprint: Dr M Kovacs, Western Psychiatric Institute and Clinic, 3811 O'Hara Street, Pittsburgh, PA 15213, USA. Fax +1 412 383 1127.

Commentary

There has been a long standing controversy as to whether illnesses such as IDDM predispose patients to psychological disturbances and/or psychiatric disorder. Research in the field has been contradictory and often methodologically limited. The study by Kovacs *et al* is an important contribution to this debate.

The aim of this longitudinal study was to investigate the adjustment of children and adolescents with diabetes. Psychiatric status was assessed at each contact by means of the standardised semistructured Interview Schedule for Children and Adolescents (ISCA). This interview was given by trained interviewers and incorporated data from separate child and parent interviews. The findings are striking in terms of the degree of psychiatric disturbances found.

In brief, 39 out of 92 patients developed a psychiatric disorder during the follow up period of 4 to 14 years; major depression

was diagnosed in 24, anxiety disorder in 18, and behaviour disorder in 15. Since there was no control group, it is not known whether IDDM conferred an increased risk for these conditions. However, the findings that 28 of the 39 youths diagnosed with a psychiatric disorder received mental health intervention and that 5 were admitted to hospital for psychiatric reasons suggest that many of the disorders identified were clinically significant. The first year after diagnosis was the period of highest risk for depression as has been found with adult medically ill populations.¹ The cumulative risk of eating disorders was approximately 5% in this mixed sample of young boys and girls who were 8 to 13 years old at study entry. Other research suggests that disordered eating behaviour that negatively affects metabolic control and retinopathy can be found in up to one third of late adolescent young women with IDDM.²

Whether the extent of psychiatric disturbance associated with IDDM is increased because of this condition or because of any chronic illness can only be answered by comparison with appropriate control groups. The findings reported in this study should alert clinicians treating patients with diabetes and other chronic medical conditions to the potential for psychiatric morbidity in these populations and to the need for appropriate mental health resources.

Gary Rodin, MD
The Toronto Hospital
Toronto, Ontario, Canada

1 Craven JL, Rodin GM, Johnson L, et al. The diagnosis of major depression in renal dialysis patients. *Psychosom Med* 1987;49:482-92.

2 Rydall AC, Rodin GM, Olmsted MP, et al. Disordered eating behavior and microvascular complications in young women with insulin-dependent diabetes mellitus. *N Engl J Med* 1997;336:1849-54.