

CHILDHOOD DIABETES MELLITUS

Background

Childhood diabetes mellitus (DM) is a chronic illness with serious ongoing consequences for the child and family. Due to its chronicity and complications (blindness, renal failure, limb amputation etc.) this illness also places a significant burden on health care costs.

The last reported national incidence of DM in children was obtained for the years 1968-1972. At this time the average annual incidence for those under 20 years was 10.4/100,000. For children up to 10 years of age it was 6.1/100,000. Since this time only regional data have been available, (from local diabetes registers). In the years 1977-1984 Auckland rates showed no change in incidence, with an average annual incidence of 9.3/100,000, comparable to the North Island rate (1968-1972) of 8.1/100,000 for children 0-15 years. Canterbury data showed an average annual incidence of 19/100,000 over the 1990-1991 period for those under 20 years. In recent years a number of preventative initiatives (eg nicotinamide) have been in place which may alter the epidemiology of DM in childhood.

The literature suggests that the incidence of childhood DM is increasing in some populations especially in the younger age groups. It is now over 25 years since the NZ childhood DM incidence was determined. Determination of the current incidence and collection of data concerning possible regional and ethnic differences would be useful in revealing possible environmental influences on the development and onset of childhood DM. The knowledge of current incidence rates and trends will be useful for health resourcing purposes also.

Objectives

- Determine the national incidence of diabetes mellitus in children age nine years or less over a two-year period.
- Determine how incidence varies with gender, race, region, season and family history.
- Compare national and regional results with those from the 1968-1972 study, and with international figures.
- Describe the clinical presentation and initial management of new cases.
- Estimate current and future demands on health resources.

Case Definition

Any child age fourteen years or less with:

either a random blood glucose measurement >11 mmol/l and classical symptoms (polyuria, polydipsia, polyphagia, weight loss, weakness, blurred vision)
or a fasting blood glucose > 7 mmol/l (confirmed on at least 2 different days)
or a blood glucose >11 mmol/l at 2 hours during an oral glucose tolerance test or 2 hours after a high carbohydrate breakfast.

Unless secondary to drugs or stress (e.g. sepsis).

Reporting instructions

The number of new cases satisfying the above criteria diagnosed in the last month should be recorded on the report card.

Follow up of positive returns

A questionnaire requesting further details will be forwarded to the reporting practitioner. There will be an accompanying information sheet and consent form for the parents/caregivers to read and sign before the questionnaire is completed and returned.

If you have any queries please contact

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THANK YOU FOR YOUR HELP AND SUPPORT