

The clinical characteristics of hybrid diabetes (HD) in children and their response to treatment.

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Introduction:

Hybrid diabetes (HD) describes a form of diabetes in which hyperglycaemia occurs in obese children in the presence of positive autoimmunity against the beta cells.

Few data are available about the clinical presentation and the course of disease in children with this form of diabetes.

Aim:

We described the clinical characteristics and response to treatment in 7 children with hybrid diabetes.

Table 1: patients characteristics at presentation

	Percentage of occurrence
Mean Age (yr)	10.8
BMI SD	2.73
acanthosis	71%
+ family history	85.70%
Polyuria/polydipsia	57.10%
ketosis no acidosis	14.20%
DKA	28.60%
C-peptide	1.42
HbA1c at diagnosis	10.63%

Results:

Seven children with HD diabetic patients whose mean age 10.8+/-0.98 years) were diagnosed and followed in our institution.

At presentation : (table 1)

- Two patients had 2 autoantibodies against beta cells,
- Four patients had 3 positive autoantibodies, and
- one patient had all 4 positive autoantibodies
- All patients were started on insulin at diagnosis,
- 5 patients received metformin in the first week after diagnosis.

During their follow-up,

4 patients did not require any insulin therapy and The other 3 patients had a marked reduction in the insulin requirement up to less than 0.2 unit/kg/day (2. 36 +/-2.79 months) after diagnosis associated with a marked reduction of HbA1c to 6.3%+/-0.7%.

The duration of either no or low insulin requirement (< 0.2 unit/kg/day) continued for an average of 15 months.

After this period

- 5 patients required initiating insulin or an increase in the insulin dose/kg.
- One required a markedly low dose (0.06 unit/kg/day) to control glycemia.
- One child remained insulin-independent and

Conclusion:

The aetiology behind hybrid diabetes is not well understood. We described the clinical characteristics of hybrid diabetes in 7 children and their response to treatment. All children with HD were obese at presentation and had easier control of their glycemia (long honeymoon period) and many did not require insulin during this period.