NOT EVERY OBESE CHILD HAS TYPE 2 DIABETES MELLITUS

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CASE PRESENTATION

- 11.84 years female
- Gradually gaining weight after 8 years
- Presented at 11.03 years with obesity
- BMI: 31.5kg/m²; BMI z-score: 3.55
- No significant past health issues

Clinical examination

Signs of metabolic syndrome
- Mild acanthosis nigricans
- Arterial pressure: 129 (>99th percentile) / 80 mmHg (>95th percentile)
- Arterial pressure: 111 (<90th percentile) / 80 mmHg (>95th percentile)

FOLLOW-UP

- Following 3 months dietary/lifestyle intervention
- OGTT repeated
- 120' glucose: 225mg/dl
- T1DM antibodies negative, C-peptide normal
- Started on Metformin (850 mg BD)

FAMILY HISTORY

- At 11.84 years BMI progressively increases (BMI z-score: 3.98 from )
- On metformin HbA1c unchanged but normal (5.5%)

CONCLUSIONS

- Cases of MODY may be difficult to distinguish from T2DM.
- Studies suggest that 5% of subjects diagnosed with diabetes before the age of 45 years have MODY, with 80% of them having been incorrectly diagnosed as having T1DM or T2DM.
- Importance of Family History – Low threshold perform genetic testing.
- Genetic testing allows confirmation of the correct diagnosis and leads to optimal treatment.

REFERENCES


CONTACT INFORMATION

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Was it type 2 diabetes or something else?

Young people with T2DM
- Present around puberty
- Majority are obese

Patients with monogenic diabetes
- May also be obese
- Can be difficult to distinguish from T2DM

Features that suggest T2DM:
- Signs of metabolic syndrome
- Severe obesity
- Acanthosis nigricans (mild)

Features that suggest monogenic diabetes:
- Family history
  - Early onset diabetes in the mother
  - Obese, GDM and T2D at 26 years
  - Patient’s brother non-obese - IGF
  - Mother’s brother T2D and stroke
  - Strong family history of CVD

Molecular diagnosis
- Choice of most appropriate treatment
- Optimize blood glucose control
- Reduce long-term complications
- Proper genetic counseling

MODY-ADO

MODY-ADO

SUMMARY

- Cases of MODY may be difficult to distinguish from T2DM
- Importance of Family History – Low threshold perform genetic testing
- Importance of Genetic testing
  - Can drive the choice of treatment
  - Assess the risk for complications
  - Provide genetic counseling
- Treatment adherence requires regular follow-up – Clinical interview skills