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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/m^2; BMI z-score: 3.55
- No significant past health issues

Clinical examination **Signs of metabolic syndrome**

- Mild acanthosis nigricans
- Arterial pressure: 129(>99th%le) /80 mmHg (>95th%le)
- Arterial pressure: 111 (<90th%le) /80 mmHg (>95th%le)

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)**

OGTT 29/7/2020	0'	60'	120'
Glucose (mg/dl)	98	229	225
Insulin (μUI/ml)	31.2		
HbA1c (%)	5.5		
Glucose in urine	Negative		

- At 11.84 years BMI progressively increases (BMI z-score: **3.98** from)
- On metformin **HbA1c unchanged** but **normal** (**5.5%**)
- A new OGTT was performed to better assess response on metformin

OGTT 19/3/2021	0'	30'	60'	90'	120'	150'	180'
Glucose (mg/dl)	123	125	170	227	234	130	216
Insulin (μUI/ml)	32.87	29.91	63.19	106.0	102.1	70.14	98.63

Unchanged

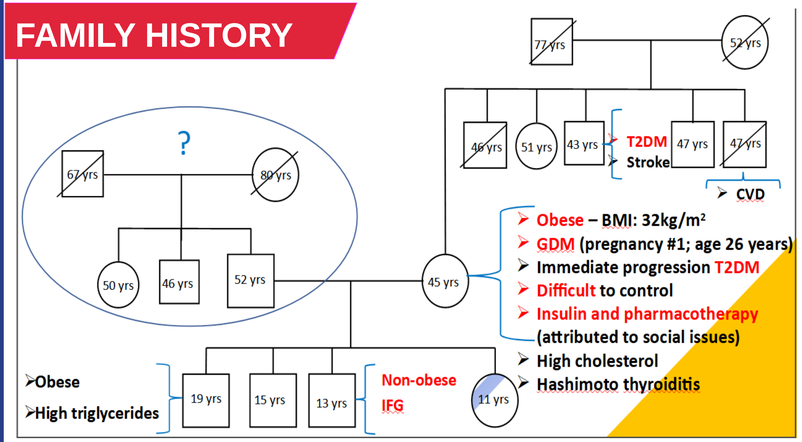
- Question of adherence
- Increased metformin to 1000mg BD

WAS IT TYPE 2 DIABETES OR SOMETHING ELSE?

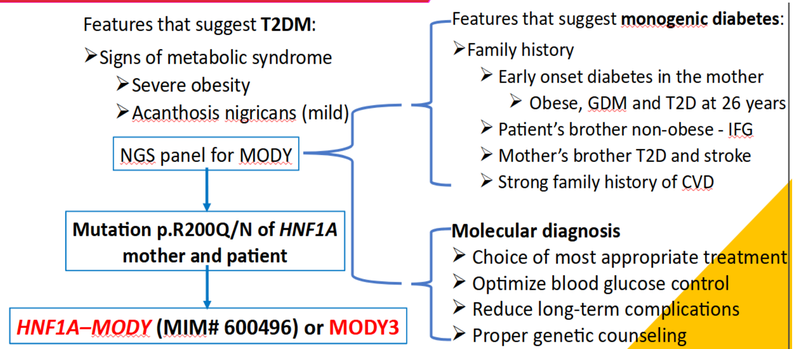
Young people with T2DM
- Present around puberty
- Majority are obese

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

FAMILY HISTORY



REVIEW OF MANAGEMENT



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

  → **Patient AND affected relatives!**
- Treatment **adherence** requires regular follow-up – **Clinical interview skills**

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

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CONTACT INFORMATION

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