Distinguishing Type 1 From Type 2 Diabetes

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I thought I had Type 2 Diabetes
Theresa May, Prime Minister
Why does it matter?

• To properly advise the patient and family
  • For men with Type 1, the chance of having a child with Type 1 is 1/17
  • For women with Type 1, if your child is born before you’re 25 the chances are 1/25. If after 25, 1/100
  • 1/7 with Type 1 have polyglandular autoimmune syndrome. Offspring of these parent shave ½ chance of developing the syndrome

• To determine the proper treatment approach including lifestyle and medication and technology
Type 1
• May present at any age
• In children, poly’s and 30 % present with DKA
• In adults, onset may be slowly progressive or precipitous (LADA)
• Presence of family history of Type 1 DM is highly predictive
• Antibodies present- more than 1 is diagnostic
• C-peptide low to absent in the setting of hyperglycemia
• Insulin sensitive

Type 2
• May present at any age
• Typically associated with overweight/obesity and positive family history
• May present with microvascular complications already present
• Antibodies typically absent
• C-peptide may be low
• Insulin resistant
Latent autoimmune Diabetes of Adulthood
LADA

• Typically presents in adults over 30
• Slowly progressive loss of insulin reserve in the presence of antibodies
• Typical requirement of insulin within six months
• Absence of insulin resistance
• Best approach to therapy is unknown- unlikely that treatment early non-insulin treatment is detrimental
Antibodies in Type 1 DM

• Antibodies may be present for years before onset
• Use of antibodies for screening in research only!
• Anti glutamic acid decarboxylase (GAD)- 65: present in 80% at diagnosis
• IAA: insulin autoantibodies, more common the younger the age at diagnosis
• ICA: islet cell antibodies- 70-90% present
• IA-2A: antibody to protein tyrosine phosphatase- present in 55-75%
Clinical tip-offs

- Persistent hyperglycemia despite 3 oral agents
- Extreme carb sensitivity (meal time surges) despite basal insulin
- Unexplained weight loss
- Unexplained fatigue
- Any episode of DKA