

# Medical Microbiology Reports

# An unusual presentation of type 2 diabetes mellitus

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#### **Abstract**

Background: Approximately 3.5 million people in the UK are diagnosed with diabetes, with over 30,000 being under the age of 19. T2DM is more common among adults, however recently more children are being diagnosed - 1.9% of newly diagnosed patients are under the age of 19. Diagnosis is not always clear-cut. For example, some patients with T2DM can experience diabetic ketoacidosis (DKA), which can result in a misdiagnosis of T1DM. As a result, patients may be started on a treatment pathway that does not address the underlying pathophysiology of their condition. This can result in long-term health consequences if not recognized and corrected early. This report presents a 20 year diagnosis of type 1 diabetes (T1DM) in a now 50-year-old male which is being challenged and re-classified as type 2 diabetes (T2DM) due to the lack of response to insulin and inability to achieve appropriate glycemic control.

**Aim:** To demonstrates the importance of establishing the correct diagnosis of diabetes early on, in order to initiate the appropriate treatment promptly and reduce the patient's risk of developing micro- and macro- vascular complications.

Methods: This patient's case was discovered and followed up while on placement in a primary care setting.

### **Results:**

- 20 years ago: 28-year-old gentleman with a BMI of 32 on presentation. Presented to A&E with polyuria, polydipsia, nausea, deep breathing and confusion. A diagnosis of DKA was established, after which he was diagnosed with T1DM and was started on a basal-bolus regimen.
- Present time: At 50 years old, his HbA1c fluctuates from 70 to 100 mmol/mol and he has historically been unable to lose weight or achieve good
  glycemic control. Negative for GAD antibodies and C-peptide levels are within normal range, which does not correspond with a diagnosis of
  T1DM.
- Treatment plan and outcome: After the original T1DM diagnosis, a basal-bolus insulin regimen was prescribed. When the diagnosis was changed to T2DM however, the management was altered. Initially he was started on mono-therapy with metformin, then this was stepped up to dual therapy with metformin and sitagliptin. This unfortunately failed to help him achieve good glycemic control due to his severe insulin resistance. This prompted a trial of dulaglutide, a GLP-1 analogue which eventually helped lower his HbA1c from 70 to 40 mmol/mol.

Conclusion: This case highlights the importance of keeping an open mind when diagnosing patients with diabetes and questioning the original diagnosis if a patient is not responding to the treatment given. This case is an unusual presentation of T2DM - with an initial presentation of DKA - which highlights how difficult it can be to diagnose the type diabetes correctly. Misdiagnosing a patient with the wrong type of diabetes will influence the specific treatment they receive, and potentially have significant long-term implications for their health.

## **Biography**

Yasmeen Hassan Al Sadek, currently working as Assistant professor at Cardiff University, UK



9th International Conference on Clinical Case Reports | May 07, 2021

Citation: Yasmeen Hassan Al Sadek, An unusual presentation of type 2 diabetes mellitus, Clinical Case Reports 2021, 9th International Conference on Clinical Case Reports | May 7th, 2021, 12