A case of severe insulin resistance in a pregnancy with type-2 diabetes mellitus

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Introduction

Type-2 diabetes mellitus (T2DM) is a disease of social disadvantage, with a disproportionate burden on Indigenous Australians. 1,2 Poorly controlled T2DM poses significant risks to women and foetuses.²

Objective

To present a case of severe insulin resistance in pregnancy requiring over 500 units of insulin.

Case Profile

- 22 year old G1P0 female
- Indigenous Australian
- T2DM diagnosed at 15 years of age
- Starting HbA1c of 9.7%
- Body mass index of 25
- Strong family history of T2DM

Case Progress

- 13+2: Metformin XR 2g daily, NovoMix 40U mane and 46U nocte
- 24+2: Admission for blood glucose level (BGL) stabilisation due to poor adherence
- 35+0: Metformin XR 2g daily, Toujeo 330U nocte, NovoRapid 46U/66U/96U TDS with meals and NovoRapid PRN with snacks

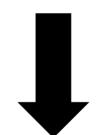
Case Outcome

HbA1c progress:

- 12+0: HbA1c 9.7% - 29+1: HbA1c 7.2% - 35+0: HbA1c 7.4%

US at 34+2: EFW 2427g, AC 50th centile, **AFI 5.6**, normal dopplers

Decision for an induction of labour at 35+0 due to BGL control and AFI <5th centile



Emergency caesarean section for failure to progress at 35+2 resulting in a liveborn male at 2752g

Discussion and Conclusions

In the context of a worldwide T2DM epidemic, there has been an increase in diagnoses amongst young adults.³ The epidemic has also seen a rise in pregnancies complicated by the effects of T2DM.⁴ Further challenges with BSL management are arising because of severe insulin resistance, especially amongst Indigenous Australians.^{5,6} Ultimately, the observation of such severe insulin resistance in Indigenous Australians requires an individualised approach. 1,2

References

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