

Case Series: Iatrogenic Preterm Delivery in Pregnancies Complicated by Type 1 Diabetes Mellitus

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Introduction

Preterm delivery is defined as delivery at <37 weeks' gestation and is associated with increased neonatal morbidity and mortality. It affects 22-45% of pregnant women with type 1 diabetes mellitus (T1DM) and includes iatrogenic as well as spontaneous preterm births. Additionally, poor glycaemic control in these women also predisposes them to an increased risk of complications during the antenatal period.

In this case series, we present 3 patients with T1DM who had preterm deliveries at <32 weeks' gestation due to complications associated with poorly controlled diabetes.

Maternal Features

There were similar maternal risk factors present in all 3 cases:

- Diagnosis of type 1 diabetes mellitus before the age of 18 years old
- All pregnancies were unplanned and therefore did not receive pre-pregnancy counselling
- All 3 patients had raised HbA1c at booking (>48mmol/L at booking)



Source: <https://pdf.org.uk/news/nhs-access-to-cgm-for-pregnant-women-with-type-1-diabetes-begins-in-england/>

Antenatal Course and Indications for Delivery

All 3 women were parous and had 1 previous Caesarean Section and were delivered by emergency Caesarean Section this time. Indications for preterm delivery included:

- 2 women developed severe pre-eclampsia
- 1 woman had recurrent reduced fetal movements on a background of recurrent episodes of hypoglycaemia in spite of reduced insulin (>10%)

Neonatal Outcome

All 3 babies were delivered between 30-32 weeks' gestation and were given antenatal steroids prior to delivery (with sliding scale cover) for fetal lung maturation. Magnesium sulphate was not indicated in any of them.

All 3 babies were admitted to the neonatal unit immediately following delivery and required respiratory support with CPAP secondary to respiratory distress syndrome.

They remained in the neonatal unit for more than 2 weeks prior to discharge home.

Conclusion and Learning Points

This case series highlights the following learning points:

- Pre-pregnancy counselling and optimisation of glycaemic control in patients with type 1 diabetes mellitus can impact on maternal and neonatal morbidity and mortality
- The use of continuous glucose monitoring may benefit these patients and achieve better glycaemic control before and during pregnancy