

Evaluating the use of Magnesium Sulphate for Preterm Births before 30weeks, as part of the PRECEPT initiative at a Central London Teaching Hospital

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Introduction

Recent studies suggest that there is significant variation in the uptake and administration of Magnesium Sulphate across maternity units for preterm births. As a result, Guys and St Thomas' Hospital (GSTT) along with three other hospital trusts in South London have implemented PREcept.

The aim of PREcept (Preventing cerebral palsy in preterm babies) is to increase the use of Magnesium Sulphate to achieve a target of 85% for all women delivering before 30weeks

Method

This was a retrospective audit with data collected for all women who delivered between the gestations of 23⁺⁶ to 30⁺⁰ weeks inclusive between June to October 2018. They were identified using the electronic system, Badgernet at GSTT. Both their electronic and hand written notes were then reviewed to identify,

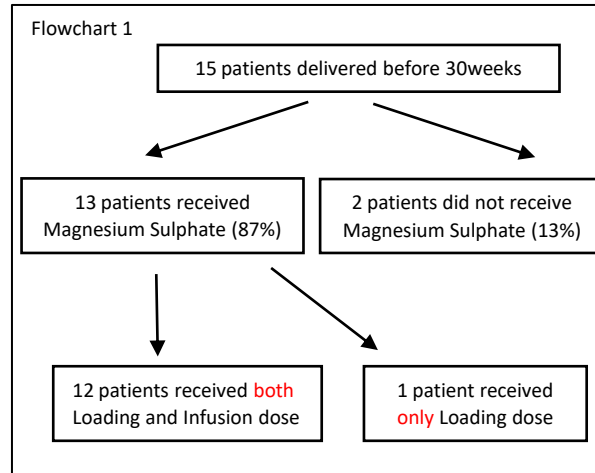
1. If they received neuroprotection,
 - Was this just the loading dose or both the loading and infusion dose
 - The time interval between starting the infusion and delivery
2. If they did not receive neuroprotection,
 - Was there a specific reason documented in regards to why it was not given

Data was also collected regarding

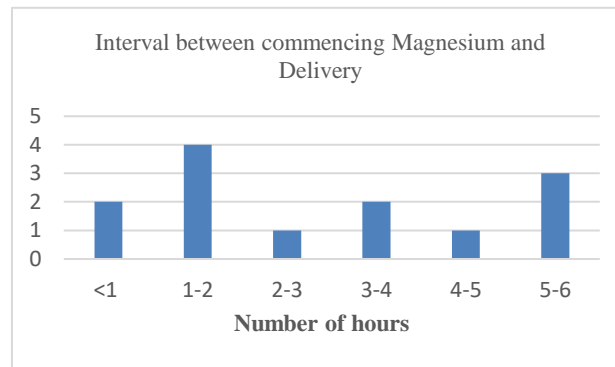
- Singleton or multiple pregnancy
- Gestation
- Risk factors for preterm birth

Results

15 patients delivered between 23⁺⁶ to 30⁺⁰ weeks from June to October 2018, with 1 patient being a twin pregnancy. The flowchart below illustrates the breakdown of women receiving neuroprotection.



The table below also illustrates the time interval between commencing Magnesium Sulphate and delivery.



Discussion

While the number of women delivering before 30weeks at GSTT over the three month period were quite small, it was motivating to see that we were achieving the target of 85%.

In order to identify areas of development, we looked more closely at the women who did not receive neuroprotection and this was presented along with the findings of this audit to junior trainees at GSTT. This brought up interesting avenues to explore in terms of education, as well as improving clinical practice. This mainly concerned the administration of the loading dose of Magnesium Sulphate, as at GSTT this is done over five minutes for woman with pre-eclampsia. Following a discussion with the involvement of the multi-disciplinary team, it was decided that the loading dose could be given over twenty minutes and that cardiac monitoring would not be required, if it was for neuroprotection only. We have also been exploring the logistics of having prefilled syringes to reduce the time taken to prepare the loading and infusion dose.

As part of our ongoing commitment to PREcept, all preterm deliveries that did not receive neuroprotection are being prospectively reviewed with individualised feedback being given to the health professionals involved in their care. This is vital to ensure that all babies born before 30weeks are given the best possible chance, not just for survival but also in terms of their future quality of life.