

Perinatal Respiratory Outcomes with the use if Antenatal steroids at c.section

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Introduction

Babies born by planned C - sections are more vulnerable to transient tachypnea of the newborn (TTN). Babies under 39 weeks are most at risk. Traditionally, the administration of antenatal steroids (ANC), has helped mature the fetal lungs.¹.

Recent evidence suggests that children exposed to steroids and delivered at term, may be at increased risk of future neurosensory and cognitive problem, leading to delays in milestones/educational achievement²

Guidance now advises against the use of ANC at >37 weeks.^{1,3}

There has been a reduction in the number of patients receiving ACS routinely in our district general hospital progressively over time.

The aim of our study, was to compare the number of babies born by elective c/secton, admitted to the neonatal unit (NNU) requiring respiratory support in 2020, when ANC were given to all babies between 37-39 weeks, against the current practice in 2022, when steroids were not administered to this group of

Methods

We retrospectively, identified women from a 3 month period in 2020 & 2022 whom had a elective C-section from our theatre diary. We searched their electronic notes to extract information on whether steroids were given, gestation at delivery, birth weight, APGARs at birth, admission to the Neonatal unit (NNU) with respiratory morbidity. The Data was entered onto Microsoft excel for analysis.

Results

•2020		•Steroids		•No steroids	
		•non neonatal unit	•Neonatal unit	•non-neonatal unit	•neonatal unit
	•37 weeks	•25	•2	•2	•0
	•38 weeks	•16	•0	•10	•0
	•> 39 weeks	•1	•0	•63	•1
	•Total	•42	•2	•75	•1
•2022		•Steroids		•No steroids	
		•non-neonatal unit	•Neonatal unit	•non-neonatal unit	•neonatal unit
	•37 weeks	•0	•0	•22	•2
	•38 weeks			•46	•5
	•> 39 weeks	•0	•0	•69	•4
	•Total	•0	•0	•137	•11

Table 1: Comparative data recording NNU admissions against use of steroids in 2020 & 2022. over the same 3 month period.

All babies included within the study had no other fetal or maternal indication for elective c/section, had birth weights ranging 3 -4.1 kg and had APGARS of 8 or 9 by 1 & 5 minutes respectively.

Data Analysis

Across the study, the data recorded demonstrates that the administration of ANC is decreasing the NNU admission from 7.4% to 1.3%.

For 38 weeks gestation the data recorded demonstrates that the administration of ANC is decreasing the NNU admission from 9.8% to 0%.

Conclusion

It is recognised that babies delivered via elective section at 37 weeks, are likely to be more vulnerable to TTN & there are likely other factors necessitating the delivery.

At 39 weeks babies born via elective section are anticipated to do well, assuming there are no other risk factors previously identified altering their risk status.

Based on the above & our data, the results for babies born at 38 weeks are most relevant. Therefore administration of steroids is recommended to decrease NNU admission < 39 weeks where elective c/section is planned. This increase in NNU term admission (albeit often short transient) has lead to increased pressure on our neonatal colleagues and NNU bed capacity.

1. Antenatal Corticosteroids to reduce neonatal morbidity and mortality. RCOG Green top Guideline No 74.

2. TOG “The obstetrician & Gynaecologist” - The role of antenatal corticosteroids in improving neonatal outcomes
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First published: 19 August 2021

3. European Guidelines on perinatal care: corticosteroids for women at risk of pre term birth. The Journal of Maternal – Fetal & Neonatal Medicine. 2023, VOL 36, No1.216068