

OBJECTIVE

To standardise the local policy & advice given to women offered antenatal corticosteroids (ACS) prior to Caesarean section at early term (37-39 weeks) as per RCOG recommendations.

BACKGROUND

RCOG guidelines recommend an informed discussion regarding the risks and benefits of corticosteroids at early term¹.

ACS use at this gestation varies across UK maternity units, including our own unit at Lister Hospital, Stevenage, UK.

This variance would bias antenatal counselling. To address this, we reviewed the evidence and engaged our department in a lively debate of whether steroids help or harm overall.

DESIGN

We analysed RCOG guidelines¹. high - quality studies and systematic reviews.

METHODS

Departmental debate between four O&G trainees one team 'for' and another team 'against' steroid use, following a literature review of relevant studies from 2017-2022.



This infographic is based on RCOG Green-top Guideline No. 74: Stock SJ, Thomson AJ, Papworth S; The Royal College of Obstetricians, Gynaecologists. Antenatal corticosteroids to reduce neonatal morbidity and mortality. BJOG 2022; <https://doi.org/10.1111/1471-0528.17027>

- References**
1. Antenatal corticosteroids to reduce neonatal morbidity and mortality. Green-top Guideline No. 74- SJ Stock, AJ Thomson, S Papworth, on behalf of the Royal College of Obstetricians and Gynaecologists. 16 February 2022. <https://doi.org/10.1111/1471-0528.17027>
 2. Evaluation of long term outcomes associated with Preterm exposure to antenatal corticosteroids: A systematic review and Meta-analysis. Ninan K, Liyanage SK, Murphy KE, Asztalos EV, McDonald SD. JAMA Pediatr. 2022 Jun 1;176(6):e220483. doi: 10.1001/jamapediatrics.2022.0483.
 3. Reducing admission of full term babies to neonatal units. Available at <https://www.england.nhs.uk/wp-content/uploads/2021/03/reducing-harm-leading-to-avoidable-admission-of-full-term-babies-into-neonatal-units.pdf>. National Health Service (2012).

RESULTS

ACS exposure in term infants is associated with a higher risk of mental or behavioural disorders (AHR- 1.47 (95% CI 1.36- 1.60) as well as proven or suspected neurocognitive disorders (AHR 1.16 (95% CI 1.10 to 1.21) ².

ACS for early term CS is a tool that can be used to support the ATAIN programme (Avoidable Term Admissions Into NICU). ³

Causation has not been clearly established. Data is limited and incomplete trial follow up in a key study. Most findings are from observational studies not RCTs.

ACS may reduce educational attainment at school age (increase in the proportion of children ranked by teachers as being in lower quartile of academic ability from 9 to 18%)

There is uncertainty if there is any reduction in respiratory distress syndrome, transient tachypnoea of the newborn or neonatal unit admission overall in early term infants.

DISCUSSION

Recommendations for ACS use in early term CS are inconsistent in the literature.

An RCOG approved infographic has been adopted in our unit to standardise counselling for ACS use¹.

Neurodevelopmental delay is multifactorial in aetiology therefore cannot be attributed to ACS use alone. However, ACS may have a role in programming the fetal hypothalamic-pituitary axis (HPA) leading to alterations in neurological and endocrine function in later life.

Antenatal steroids may prevent unnecessary term NICU admissions and the negative experience of parents.

Counselling bias must be avoided. Patients should be encouraged to make an informed choice.

