

**Short Communication**

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Steroids Administration at Term in Egypt: Does it become a Routine Practice?

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Background: Antenatal steroids become a routine daily practice before elective Cesarean deliveries in Egypt. These drugs were recommended only from 24 weeks to 34 weeks of gestation to minimize respiratory morbidities in newborn. Steroids are not without side effects or complications for both the baby and the mother.

Objective: To evaluate the evidence regarding the use of antenatal steroids at term prior to scheduled cesarean delivery.

Materials and Methods: Reviewing published data in recent ten years since January 2009 till 31, December 2017.

Results: Antenatal steroids were recommended only from 24 weeks to 34 weeks with extension up to 37 weeks of gestation not later to minimize respiratory morbidities in newborn.

Conclusion: Steroids are not without side effects or complications for both the baby and the mother. These drugs should be limited to high risk patients with imminent preterm birth and discouraged before term deliveries till evidence approve its long-term safety.

Keywords: Antenatal steroids; Scheduled; Cesarean delivery; Neonatal; Maternal outcomes

Introduction

Antenatal steroids were mainly given in high risk situations with eminent preterm birth as multiple gestations, cervical incompetence, polyhydramions and patients with history of previous preterm birth. Corticosteroids are of great benefit for normal development and enhancement of lung maturity. Evidence supports the use of steroids in those patients with strong limitation to single course and discouraging multiple weekly courses. Many authors advocate the use of steroids at term before scheduled cesarean delivery, but other institutions disagree with the results and conclusions of these studies [1,2].

Discussion

Nowadays, many studies emerged with evidence supporting the use of such drugs before term cesarean delivery \leq 39 weeks. This practice became a routine daily practice even in gestations beyond 39 weeks. Many researchers advised the use of steroids before term elective cesarean section to reduce respiratory and composite morbidities [3-5].

On the other hand, many studies found that exposure of the fetus at term to corticosteroids either by betamethasone or dexamethasone can profoundly affect the development of the neuroendocrine system at term than at any other time in pregnancy duration. These drugs had life-long effects on endocrine system, emotions, affection and cognitive functions. These side effects of corticosteroids are still under continuous investigation and evidence till now didn't reach to a final conclusion regarding this issue [6,7].

Do exogenous synthetic steroids affect endogenous corticosteroids surge near term? Do they affect the mechanism and initiation of parturition mechanism? Do they affect brain and other organs if they were given prior to delivery? Evidence still had no clear answers to these questions. Debates are still present whether to revise the use of steroids before term cesarean or not [6,7]. Nabhan A et al [8], in their study found that prophylactic antenatal corticosteroid for elective cesarean delivery between 34 and 37

weeks is not effective in improving neonatal outcomes [8]. De Vivo et al, found that wound complications were more in patients who received antenatal steroids before Cesarean section [9].

Davis et al, examined 54 children, at early school age (6-10 years), where they were exposed to a single course of betamethasone in-utero at 29.3 weeks, and delivered at term, and compared them to matched controls. There were alarming findings in children exposed to corticosteroids. They found that great differences in cortical thickness associated with significant thinning of the cortex, which were led to development of affective disorders and hypothalamic-pituitary axis dysregulation [6]. Moreover, antenatal steroids are linked to neonatal hypoglycemia as stated by the American Academy of Pediatrics [10].

The Society for Maternal-Fetal Medicine (SMFM) advised the use of a single course of corticosteroids in late preterm only in cases with imminent delivery [11]. The American College of Obstetricians and Gynecologists expanded the use of antenatal steroids to include gestations from 23 to 37 weeks [12]. Today's shift of these drugs to term pregnancies >37 weeks is not recommended by previously mentioned organizations. On the other hand, obstetricians should avoid elective deliveries before 39 weeks to reduce the morbidity associated with these deliveries [11,12].

Finally, balanced use of these drugs should be settled, and routine use of steroids should be discouraged till evidence of their long-term safety is clear.

Limitation of Study

The limited number of studies assessing delayed complications of corticosteroids given during pregnancy but nearly no studies were found to assess the same outcomes following their administration at term.

Conclusion

Routine use of steroids before scheduled deliveries prior to 39 weeks should be discouraged in low risk patients. These drugs are not safe enough to be abused in such manner. These drugs have both short term and long-term complications. The risk for irreversible changes in the brain and the hypo-pituitary axis, should be considered when prophylactic steroids are prescribed.

Acknowledgment

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Conflict of Interest

No conflict of interest.

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