

Understanding clinical audit and its implementation for improving clinical practice in obstetrics

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Abstract

Background: Aim of this audit was to analyse the compliance to give antenatal corticosteroids for patients undergoing elective caesarean section at less than 39 weeks of gestation performed at Dr.Hedgewar Hospital, Aurangabad. The first objective was to do Sensitization of all the consultants on importance of giving antenatal corticosteroids till 39 weeks of gestation The second objective was to learn how an audit can be done and used for improving clinical practice. **Methods:** Present study involved all patients who underwent elective caesarean section before 39 weeks of gestation between 1st October 2020 to 31st December 2020. Data collected from the case sheets from the medical record department . Exclusion criteria: Patients who underwent elective caesarean section after 39 weeks completed period of gestation. **Results:** The audit showed 47.5 % of patients received antenatal steroids. The observation was discussed in consultant meetings, and was sent as e-mail to every one working in Department of Obstetrics and Gynaecology. The goal was 100%. As per traditional teachings, antenatal corticosteroids were given for patients who are at risk of preterm labour. This guideline of giving steroids for elective caesarean section till 39 weeks was not known to all. Reaudit is to be performed in year time to know the effect of change in practice. Clinical audits are structured programmes with realistic aims and objectives. The audits should be nondirective and be combined with discussions giving emphasis on team work and support. This type of environment is more conducive to conducting audit.

Keywords: Audit, Antenatal steroids.

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INTRODUCTION

The study was based on the green top guideline on antenatal corticosteroids to reduce neonatal morbidity and mortality. Guideline recommends that antenatal corticosteroids should be given to all women for whom an elective caesarean section is planned prior to 39 weeks of

gestation¹. The incidence of caesarean section is 35 % in the Obstetrics Unit of Dr. Hedgewar Hospital, Aurangabad. Studies have shown that delivery by elective caesarean section at less than 39 weeks of gestation can lead to respiratory morbidity in neonates, requiring admission to the neonatal intensive care unit (NICU)²⁻⁵. A recent retrospective cohort study showed that, compared with elective caesarean section births at 39 weeks of gestation, births at 37 weeks of gestation and at 38 weeks of gestation were associated with an increased risk of a composite outcome of neonatal death or respiratory complications, treated hypoglycaemia, newborn sepsis and admission to the NICU.⁵ The rates of adverse respiratory outcomes, mechanical ventilation, newborn sepsis, hypoglycaemia, admission to the NICU and hospitalization for 5 days or more were increased by a factor of 1.8–4.2 for births at 37 weeks of gestation and 1.3–2.1 for births at 38 weeks of gestation. Treatment with

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antenatal corticosteroids prior to delivery by elective caesarean section has been shown to reduce the need for admission to the NICU up to 39 weeks of gestation compared with controls. A randomized controlled trial showed that the relative risk of admission with *RDS* in babies treated with antenatal corticosteroids prior to elective caesarean section at term was 0.46 (95 % CI 0.23–0.93, $P = 0.02$). The relative risk of *transient tachypnoea* of the newborn was 0.040 in the control group and 0.021 in the treatment group. The predicted probability of admission to NICU at 37 weeks of gestation was 11.4 % in the control group and 5.2 % in the treatment group, at 38 weeks, it was 6.2 and 2.8 %, respectively, and at 39 weeks, it was 1.5 and 0.6 %, respectively⁶.

Elective lower segment caesarean section should not normally be performed until 39 weeks of gestation, rather than the administration of antenatal corticosteroids.

RESULTS

Table 1

Total number of patients undergone elective LSCS	Received antenatal steroids	Not received steroids
40	19	21

DISCUSSION

The audit showed 47.5% of patients were given antenatal corticosteroids. The observation was discussed in consultant meetings, and was sent as e-mail to every one working in Department of Obstetrics and Gynaecology. The goal was 100 %. Reaudit is to be performed in year time.

Clinical audit: Background:

While research is concerned with discovering the right thing to do, audit is concerned with ensuring that the right thing is done⁷. Clinical audit helps in improving the patient care and outcomes through systematic review of care against a reference standard. This leads to the implementation of change in the clinical practice. Where indicated, changes are implemented at an individual or team level. It is an ongoing process. Further monitoring of the change is also needed by reauditing after a time period. So clinicians should be aware of the principles of the audit.

Five principal steps:

- selection of a topic
- identification of an appropriate standard
- data collection to assess performance against the prespecified standard
- implementation of changes to improve care if necessary
- data collection for a second, or subsequent, time to determine whether care has improved.

Selection of a Topic

In selecting a topic for audit, priority should be given to common health concerns. It is preferable to choose topics where good research evidence is available.

Identification of an Appropriate Standard

The criterion is the reference point against which current practice is measured. High-quality evidence-based guidelines can be used as the starting point for developing criteria. Where this is not possible, criteria should be agreed by a multidisciplinary group including those involved in providing care and those who use the service. Review criteria should be explicit rather than implicit⁸ and need to lead to valid judgements about the quality of care, and therefore should be based on research evidence.

Standard and Target Level of Performance

This is defined as ‘the percentage of events that should comply with the criterion’. Target levels of performance should be examined periodically.

Benchmarking

This is the ‘process of defining a level of care set as a goal to be attained’. Benchmarking techniques are useful in audit to avoid setting unnecessarily low or unrealistically high target levels of performance. National audits may provide data for benchmarking⁹.

Data collection: to assess performance against the prespecified standard data collection in criterion-based audit is generally undertaken to determine the proportion of cases where care is in accordance with the criteria. Consideration needs to be given to which data items are needed in order to answer the audit question. Definitions need to be clear so that there is no confusion about what is being collected.

Sources of data include:

- clinical records
- data collection through direct observation or from questionnaire surveys of patients.

Where the data source is clinical records, use of a standard proforma can improve accuracy and reliability of data collection.

Implementation of Changes to Improve Care if Necessary

Data analysis and interpretation leads to the identification of clinical areas that needs attention . There are many methods by which this can be done. The feedbacks can be discussed in the meetings. Subsequently the solutions will be agreed upon. Analysis of the barriers to change should be done.

CONCLUSION

As per traditional teachings ,antenatal corticosteroids were given for patients who are at risk of preterm labour. The green top guideline of giving steroids for elective caesarean section till 39 weeks was not known to

all.Reaudit is to be performed in year time to know the effect of change in practice. Thus the clinical audit helps in sensitization of everyone to improve the ongoing clinical practice as our results are compared against a strong evidence reference standard.

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