Decision to delivery time interval in emergency caesarean section.

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Abstract

To audit the performance of our obstetrical unit Decision to delivery time interval (DDI) in emergency section for fetal distress and to identify the factors in delay and its impact on perinatal outcome were the objectives of this study. During first cycle of audit 27% met the standard of 30 minutes which improved to 60.75% in final audit cycle. Underlying factors for delay were corrected by introducing time sheet, activation of “Obstetric Crash Code” and inter-department protocol. Woman awareness and consent were the main factors for delay throughout the cycle. Significant association between DDI and admission to SCBU as the time interval increased. P-value <0.001.

Objectives

- To audit the indicator of quality of care.
- To identify the factors in delay.
- To plan the improvement in performance.
- To evaluate the impact of delayed decision on neonatal outcome.

Method

Study design: Retrospective and prospective clinical audit.
Setting: Nizwa regional hospital, Sultanate of Oman
Sample size: 250 women with fetal distress, antepartum haemorrhage & cord prolapse
Duration of study: Three audit cycles were carried out over a period of three months each of three months duration from 2011-2013

1st Audit cycle (1st April to 30th June 2011):
Retrospective study, 27.3% cases met the standard of 30 minutes.
Factors in delay were:
(a) Poor communication and coordination in delivery
(b) Shortage of staff
(c) Patient Consent
(d) Delay in shifting woman to O.T.
Recommendations:
(a) Implication of a Performa (Time sheet).
(b) WA counselling and education - To focus for quick consent.
(c) To improve inter-departmental communication.
Improvement strategies:
(a) Introduction of Inter – departmental protocol
(b) Staff and women education
(c) Availability of second theater.

2nd Audit cycle (1st April to 30th June 2012):
Prospective Study, 44.57% cases met the standard of 30 minutes.
The time sheet (from consent to delivery) proved helpful. But inter-departmental communication and woman consent were still main delaying factors. Obstetric Crash Code was introduced.

3rd Audit cycle (1st April to 30th June 2013):
Prospective Study, 60.75% cases met the standard of 30 minutes.
The induction of time sheet and activation of “Obstetric Crash Code” improved the working and time awareness of 30 minutes.

Time between DDI. Values are number (percentage) of cases.

<table>
<thead>
<tr>
<th>Time</th>
<th>1st Audit Cycle</th>
<th>2nd Audit Cycle</th>
<th>3rd Audit Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 minute or less</td>
<td>24 (27.3%)</td>
<td>37 (44.57%)</td>
<td>48 (60.75%)</td>
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<tr>
<td>30 - 60 minute</td>
<td>30 (34.09%)</td>
<td>30 (30.14%)</td>
<td>21 (26.58%)</td>
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<tr>
<td>More than 60 minute</td>
<td>34 (38.63%)</td>
<td>16 (19.27%)</td>
<td>10 (12.65%)</td>
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</tbody>
</table>

Conclusion

Though the standard target of decision to delivery time interval of ≤30 minute was not achieved 100%. But the factors in its way suggest how to pave the condition for the best outcome.

References

- Jane Thomas, Shantini Paranjothy, and David James. National cross sectional survey to determine whether the decision to delivery interval is critical in emergency caesarean section. BMJ 2004 March20;328(7443):665.