

Primary caesarean section rates

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Abstract

Rising rates of deliveries by caesarean Section (CS) have been a global concern for over the past few decades. CS delivery not only increases the risk of maternal mortality but also of maternal morbidity by several folds. Maternal concerns include wound site pain, prolonged hospital stay, increased use of antibiotics and analgesics.

Keywords: ventilation; thromboembolism; fetus

Introduction:

Complications with caesarean deliveries range from hemorrhage, shock, need for transfusion, anesthetic complications, need for assisted ventilation, thromboembolism, major infections, multiple organ dysfunction (MODS) and cardiac arrest. When compared to vaginal delivery, caesarean section is associated with: Threefold increase in maternal morbidity (0.9 versus 2.7%) and Fourfold increase in maternal mortality (3 versus 13.3 per million) respectively [1].

In addition to above, there are social and emotional implications of caesarean birth like poor birth experience, late contact with the baby, non-establishment of breast feeding also several neonatal morbidities like respiratory problems, accidental surgical cuts etc can occur. It influences future operative deliveries and is associated with risk of placenta accreta spectrum [PAS] and hysterectomy as well. Caesarean deliveries require more human resources and also pose a higher financial burden [2] Most of these complications are more serious in resource-limited settings, reinforcing the restraint which should be used in deciding to perform CS [3].

World Health Organization (WHO) in 1985, in a meeting of a panel of Reproductive health experts in Fortaleza, Brazil, recommended that ideal caesarean rates should be between 10 and 15%. [4,5] Later in 2014, WHO concluded that 10-15% caesarean section rates at population level are associated with decreases in maternal, neonatal and infants mortality. And further increase in rates confer no additional benefit. [6]. However, WHO also recommended that at hospital level, it is essential to monitor the rates of the CS taking into account the specific characteristics of the population that they cater and serve [6]. A Cross-sectional, ecological study of secondary analysis of 7 years data in all 194 WHO member states, came up with the conclusion that 19% cut-off for caesarean deliveries is associated with lower maternal or neonatal mortality. [7].

In India, caesarean delivery rate in public health care facilities increased from 7.2% in the NFHS-1 to 11.9% as per the NFHS-4. In private health

care facilities, the rate had increased by 3-fold, from 12.3% in the NFHS-1 to 40.9% in the NFHS-4. [8, 9].

Although caesarean delivery can be life-saving for the fetus, the mother, or both in certain scenarios, the rampant increase in the rate of caesarean births without a concrete evidence of simultaneous decreases in maternal or neonatal morbidity or mortality has raised a significant concern that there is an ongoing misuse of caesarean delivery [10].

Increasing concerns over the rising CS rates has motivated research to identify effective interventions that would safely reduce CS rates in settings of overuse. Despite this effort, most tested interventions have not been associated with appreciable success [11, 12].

Therefore, it has become very important for all the health care providers to understand the short-term and long-term tradeoffs between caesarean and vaginal delivery, as well as the safe and appropriate opportunities to prevent overuse of caesarean delivery, in particular, the primary caesarean delivery [13].

The most common indications for primary caesarean delivery include, labor dystocia, fetal distress as determined by abnormal or indeterminate fetal heart rate tracing, fetal malpresentation, multiple gestations, and suspected fetal macrosomia. Although CS done on maternal request and that considered due to external medico-legal pressures are on rise, the indication for CS should be considered judiciously. Based on the findings of consortium of safe labour [14], ACOG did propose a number of guidelines in an attempt to promote judicious use of caesarean section deliveries. They included guidance on Monitoring of labour by partogram, specific criteria for failed induction or labour dystocia, assisted vaginal birth (AVB), promotion of vaginal trial in twin pregnancies with cephalic first twin and promotion of assisted breech delivery and also adequate training for CTG interpretation [13].

Auditing of caesarean section rates and their indications has been suggested as a tool for limiting the unnecessary caesareans [15] several

controlled before-and-after studies and a meta-analysis have suggested that audit and feedback have been successful in reducing the CS rates [16-19]. The way to reducing repeat CS for previous CS lies in reducing the primary CS per se, and also in judiciously considering Vaginal Birth after CS [VBAC] in deserving patients. A 2007 review found that the cesarean delivery rate was reduced by 13% when audit and feedback were used exclusively but decreased by 27% when audit and feedback were used as part of a multifaceted intervention, including second opinions and culture change. Therefore, systemic interventions provide an important strategic opportunity for reducing cesarean birth rates [20].

Caesarean section rate at a population level is an indicator of accessibility, availability and utilization of this facility [6, 21] The recent publication from WHO also highlights the need for studying maternal and perinatal morbidity indicators [short term and long term such as birth asphyxia, obstetric fistulae, etc.] in relation to cesarean section rates for optimizing the outcomes than just mortality statistics [6].

Caesarean sections exist at an alarming rate even in referral hospitals and this suggests that a vast number of unnecessary cesarean births can be averted by introducing a focused Cesarean section audit system. Audit has proved to be a very useful tool and, if well implemented, it can improve decision-making and harmonise practice among the care providers [22].

This reduction of unjustified cesarean section suggests enhancement of knowledge and harmonisation of decision-making among health care providers, indicating improved quality of management of labour. General agreement is that, although caesarean sections have become a much safer procedure over the past many years, it cannot replace vaginal delivery in terms of low maternal and neonatal morbidity, mortality and less resources and financial expense.

To ensure that unnecessary cesarean deliveries are reduced, a broad range of evidence-based approaches are necessary, including reforms in individual clinician practice patterns, development of clinical management guidelines from a wide range of organizations, implementation of systemic approaches at the every organizational and regional level, and strict reform. [13] In addition to all this, individuals, organizations, and governing bodies should also work together to ensure that research is conducted to provide a better knowledge-based guidance for decisions regarding cesarean delivery and to encourage policy changes that would safely lower the rate of primary cesarean deliveries

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