Rising rates of caesarean section: the way ahead

As early as 1960, Munro Kerr wrote: “I fear that today more than ever before, there is a danger of abdominal delivery being regarded as the legitimate method of dealing with each and every obstetrical abnormality”. Currently in addition to every obstetrical abnormality, caesarean section (CS) is frequently performed for no obstetrical abnormality at all.

The increase in the rates of CS is a global phenomenon that has got the profession, the public and those who care for women’s health worried, because the rise has not contributed to an improved pregnancy outcome. A study by the Indian Council of Medical Research (ICMR) in 33 tertiary care institutions noted that the average CS rate increased from 21.8 per cent in 1993-1994 to 25.4 per cent in 1998-1999. The WHO recommends that a CS rate of more than 15 per cent is not justified.

Expanding indications for caesarean section

A “perfect storm” of medical, legal, and personal choices and financial benefits has contributed to an uncontrolled rise in the rate of CS.

Medical

A previous CS is the most frequent indication in developed and developing countries. Strategies to contain the rates of CS call for a reduction in primary CS and to give a chance for vaginal delivery for those with previous CS. The success of vaginal birth has been very encouraging, though associated with small risk of scar rupture. Very careful monitoring and facilities for emergency surgery are essential.

The other indications are foetal distress, breech presentation, multiple pregnancy, and pregnancy resulting from assisted reproductive techniques. The number of CS has increased tremendously with the use electronic foetal monitoring.

As for routine CS for breech presentation, the data from a large study concluded that for countries with a high perinatal mortality rate (PMR >20), there is no benefit of CS. An alternative approach is performance of an external cephalic version under careful monitoring and adoption of a selective vaginal birth policy.

Caesarean section is advocated for low birth weight and very low birth weight babies and for those presenting by breech in developed countries. From the Indian context, the benefit of CS for very low birth weight babies is questionable, even a some tertiary care institutions are unlikely to have neonatal intensive care units.

Women today embark on a pregnancy at a late age and their chances of undergoing CS are high. A study from Kerala noted that cohorts of older mothers were at higher risk to undergo CS.

Nonmedical

Caesarean section at request—In recent years the doctors are faced with a dilemma when the mother requests for CS in an uncomplicated pregnancy. A number of women request CS because they think that there is more risk of intrauterine death, brain injury and pelvic floor damage associated with vaginal
delivery. Pelvic floor and sphincter damage occur consequent to difficult vaginal operative deliveries that are not recommended in the current obstetric practice.

Woman’s autonomy—Those physicians who support “CS at request” believe that a mother’s autonomy and the right to choose must be respected. The mother’s request for a particular method of delivery is based on the fear of complications of the other method; to some extent the choice is guided by cultural beliefs in a particular society, and therefore the woman’s decision for CS is not necessarily rational.

A survey among obstetricians in the UK, exposed to the risks of both CS and vaginal delivery noted that 31 per cent of obstetricians opted for CS. In Italy, where by law the woman can choose the way she would like to deliver, only 4 per cent opted for CS. It has been noted that certain individual obstetrician characteristics influence CS rate and obstetrician’s commitment helps to lower the rates.

The advantages of safe vaginal delivery over a CS are clear; vaginal delivery is associated with lower maternal and neonatal mortality and costs less. Knowing this, should a doctor perform an abdominal delivery in the absence of any abnormality? A serious ethical issue that warrants a debate.

Clearly, a majority of women will want to deliver vaginally. Thus, if a woman’s autonomy is to be respected for CS, the obstetricians must be able to give the woman a chance for vaginal delivery, including vaginal operative delivery.

Fear of malpractice litigation—With two lives to be considered while making any decision in obstetrics, the risk of medical litigation is enormous. A small blip in the electronic foetal heart rate tracing could be absolutely harmless, but may be of great significance in the courtroom should there be an adverse foetal outcome. The trend to perform CS to avoid adverse effects on the foetus like neurological problems including both cerebral palsy and seizures following vaginal delivery lacks well-documented association.

It is unfortunate that maternal complications following CS do not get the due importance from health care providers while resorting to the operation. One must remember that a mother can sue the doctor for an unnecessary CS especially when something goes wrong.

Social and demographic factors—From a social point of view a mindset has been created among the lay public that CS is absolutely a safe operation. It is true in many health facilities that unsympathetic health care providers make the experience of vaginal delivery unpleasant. In the Indian context, day and time of birth are very important astrologically and women seek to deliver by CS on a specified day and at a specified time. In Brazil, women believe that vaginal delivery will spoil their sexual performance and hence opt for CS.

Caesarean section is efficient in terms of time and is also more remunerative to the health facilities and to the doctors. Surveys have confirmed the obvious that the rates of CS are higher in private hospitals. It may be concluded that CS is abused for the purpose of profit.

Safety of caesarean section

Maternal outcome—Caesarean section is associated with complications like haemorrhage, infection, and pulmonary embolism. The risk of a mother requiring hysterectomy is 10 times greater after CS as compared to vaginal delivery and the risk of mortality is increased up to several fold when compared to vaginal delivery. In the ICMR multicentric study, the mortality rate was noted to be 299 per 100,000 deliveries. Most deaths occur among women undergoing emergency CS and those with complicated pregnancies. In the ICMR study, there were 21 deaths; anaesthetic complications occurred in 15 cases, surgical complications in 110.
cases and blood transfusion was required in 465 cases\(^2\). The results of this study call for a survey on CS, not only in public hospitals, but also in private hospitals with a focus on long-term morbidities, which are often underestimated.

Perinatal outcome—Despite the increase in foetal indications for CS, perinatal deaths continue to be high\(^2\). The increase in the rate of CS was associated with increase in foetal mortality rates and higher number of babies admitted to the neonatal intensive care units (NICU) for 7 days or longer even after adjustment for preterm delivery\(^12\). Caesarean section is performed to avoid birth trauma, but there are reports to attest the occurrences\(^14\). It is a well-documented fact that the incidence of premature delivery and respiratory distress syndrome is higher following CS than vaginal delivery\(^15\).

In Singapore a low perinatal mortality rate (PMR) of 4.39 (babies weighing more than 1000 g) was achieved with a CS rate of 11.7 per cent\(^16\). It is evident from the latest data that high rate of CS did not improve perinatal outcome\(^12\). Among obstetricians in the USA with high rates of CS, the foetal death among low birth weight babies was higher than for obstetricians with lower rates of CS\(^17\).

The 2005 WHO global study\(^12\) has put to rest the belief that high rate of CS improves pregnancy outcome, a view that supports the rising rates of CS. A higher rate of caesarean delivery was associated with a greater risk of maternal and newborn illness and death.

**Quality of obstetric care:** As noted in the ICMR study\(^2\), the rates were high in the institutions located in the region of India where most women deliver at home and only those with complications seek care in these institutions. These findings indicate that there is a need to improve obstetric care in the rural parts of the country.

Good obstetric care by skilled health care personnel, including doctors must be ensured by instituting competency based curricula; efforts must be made to stress on decision making skills using clinical findings supported by investigative aids. Due importance must be given to communication skills and discussion of ethical issues.

In today’s practice it is imperative to use standard management protocols and to seek a second opinion from a colleague in order to reduce the rate of CS\(^16\).

The path ahead: It is well established that maternal and perinatal outcome are linked strongly to good obstetric practice rather than CS\(^17\). This has been confirmed recently in a WHO 2005 global survey done in eight countries in Latin America\(^12\). In developing countries with poor infrastructure, lack of well-qualified manpower and non availability of blood, both mortality and perinatal morbidity and mortality and the women’s future reproductive performance are a cause for concern. The decision to perform a CS must be maternity-centered and not technology-centered.

Each institute with high rates of CS must critically analyse the reasons for high rates, review the PMR and develop appropriate guidelines to reduce the rates. For the first time in India, rates of CS are available at the national level but there is a further need to obtain standardized information to help policy makers. An increase in the rates of CS is a burden on the health system that works with limited budget. Therefore, health authorities, professional associations, medical colleges, the public and the media should work together towards containing the rates of CS.

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