

CAESAREAN SECTION : HOW SAFE IS IT ?

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SUMMARY

Maternal mortality following caesarean section for a 10 year period 1981-1990 at the Nowrosjee wadia Maternity Hospital is presented. Incidence of caesarean section has progressively increased from 6.5% in 1981-82 to 9.04% in 1989-90. Mortality from caesarean section has declined from 321.5/100,000 in 1981-82 to 190.8/100,000 in 1989-90.

INTRODUCTION :

Caesarean section is the most frequently performed major surgery in obstetrics. The number and hence the rate of caesarean deliveries has been progressively increasing in recent years. Caesarean section is being done more liberally than before. The indications have also widened. Advances in our knowledge and technique has made it possible for us to detect antepartum and intrapartum complications early. Advances in neonatal care make us more confident in delivering a low birth weight baby abdominally.

Repeat caesarean section, breech presentation, foetal distress, antepartum haemorrhage and medical disorders form some of the main indications for a caesarean section in the modern era. In the western countries increasing fear of lawsuits compel the obstetrician to take a quicker recourse to abdominal delivery.

Improved anaesthesia, availability of effective antibacterial agents, blood transfusion fa-

cilities and improved surgical technique - all have made caesarean section safer than before. This has also made it easier to take a decision in favour of caesarean section. Pritchard et al 1985 quote a frequency of 18.3% caesarean births in 1983. Better medical control of hypertension, diabetes and heart disease have all made maternal mortality from caesarean section a rarity in the west.

Though mortality and morbidity associated with caesarean section is on the decline, it is nowhere comparable to that following a vaginal delivery. A primary caesarean section is often followed by a repeat caesarean section, thus adding on to the risk.

In India the maternal mortality rate is still high. Haemorrhage, sepsis and hypertensive disorders still form the triad of killers. All practicing obstetricians need to be cautioned against liberal use of caesarean section. The aim of this 10 years study is to project the mortality due to caesarean section in one of Bombay's leading teaching institution and compared it with the data available from the literature.

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MATERIAL & METHODS : the cases undergoing caesarean section was reviewed in detail and the cases were analysed. The data was arranged in groups of two years each for the purpose of easy handling.

All cases delivered at Nowrosjee Wadia Maternity Hospital during the 10 year period 1981 to 1990 were studied. The mortality occurring in

Table - I shows the incidence of caesarean section at Nowrosjee Wadia Maternity Hospital, Bombay.

TABLE - I

Incidence of Caesarean sections

Year	Confinements	Caesarean	Incidence
1989 - 90	11,587	1048	9.05%
1987 - 88	25,847	1804	6.98%
1985 - 86	22,223	1495	6.73%
1983 - 84	19,257	1294	6.71%
1981 - 82	19,126	1244	6.50%

The table shows an increasing incidence of caesarean deliveries. Whereas it was 6.5% in 1981-82 it is 9.04% at present i.e. in 1989-90.

Table - II shows the leading indications of caesarean section.

TABLE - II

Indications of Caesarean Section

	Indications		
	1981 %	1985 %	1990 %
1. Cephalo-pelvic disproportion	22.22	15.98	14.12
2. Repeat caesarean section	19.93	20.40	19.66
3. Foetal distress	19.77	16.69	19.75
4. Breech presentation	5.82	6.85	11.83
5. High risk pregnancy	8.47	20.68	19.18
6. Antepartum Haemorrhage	6.64	7.99	4.68

Caesarean section due to CDP is less frequently performed today, thanks to the policy of partographic active management of labour. Its use for breech presentation and in cases of high risk pregnancy is also understandably increased.

Mortality in caesarean section has declined from 321.54/100,000 births in 1981-82 to 190.8/100,000 births in 1989-90. Mean of the first 5 years is 308.7/100,000 while that of the next 5 years is 219.4/100,000.

As seen in Table - III the mortality following caesarean sections has also reduced.

TABLE - III
Mortality following caesarean section

Year	C. Section	Maternal Mortality	
		No	Rate/ 100,000
1989 - 90	1048	2	190.8
1987 - 88	1804	6	332.6
1985 - 86	1995	3	200.7
1983 - 84	1294	3	231.8
1981 - 82	1244	4	321.5

There is a general declining trend, but the rates are still significantly high. Whereas the mortality from caesarean sections in 1985-90 was 219.4/100,000, the overall hospital maternal mortality was as low as 77/100,000 births, about 3 times lower.

There were a total of 18 deaths in the caesarean section group in this 10 years period. Table - IV shows us the causes of maternal mortality.

TABLE - IV

Causes of Post Caesarean Deaths

Cause	Total Number in 10 years
1. Haemorrhage	9
2. Sepsis	4
3. Embolism	2
4. Medical disorder	2
5. Anaesthesia	1

The table lists only the principle causes. Very often there were more than one cause, complicating one another. Haemorrhage heads the list, closely followed by sepsis. When pregnancy is associated with a medical disorder then a prolonged labour, infection and anaesthetic risks tilt the balance against the patient.

DISCUSSION :

Table - I shows us that there is a progressively increasing incidence of caesarean section. There are many reasons for this and they have already been mentioned. The perinatal mortality rates are progressively falling over this time and it is tempting to attribute this drop directly to the increase in C. Section rates. However the report of O'Driscoll & Foley (1983) has shown that the increased rate of caesarean section was not responsible for the observed decrease in perinatal mortality. However they mainly considered perinatal mortality and not perinatal morbidity which is difficult to quantitate. However it is abundantly clear that the rapidly rising caesarean section rates are not entirely justifiable.

Table - II shows us the indications for caesarean section. It can be seen that section rates for cephalopelvic disproportion are dropping, whereas that for breech presentation and high risk pregnancy are on the rise. Early diagnosis of obstetric complications and medical disorders

associated with pregnancy have played an important role in high risk pregnancy group. As far as breech presentation is concerned, high perinatal mortality associated with breech delivered vaginally and small family norm have influenced the caesarean section rates.

Though maternal deaths are on the decline, they are yet sufficiently high to elicit concern. Table V shows comparative maternal mortality rates of caesarean section and vaginal deliveries.

TABLE - V

Maternal Mortality following vaginal V/S Abdominal Delivery

Year	Maternal Mortality Rate Per 100,000 Births	
	Caesarean Section	Vaginal Delivery
1989 - 90	190.8	73.7
1987 - 88	332.6	50.4
1985 - 86	200.7	68.2
1983 - 84	231.8	56.91
1981 - 82	321.5	57.0

Certainly, maternal and perinatal mortality and morbidity are typically higher with caesarean delivery than with vaginal delivery, in part because of the complication that led to the caesarean section and in part because of increased risks inherent in the abdominal route of delivery.

Mehtaji (1969) from Cama Hospital, Bombay reported a maternal mortality of caesarean section of 5.1% in 1930 which reduced to 0.87% in

1960. Deshmukh et al (1985) reported a caesarean section mortality of 7.44% in 1971 declining to 1.73% in 1980. Frigoletto and associates reported a zero maternal mortality rate in 10,231 cases of caesarean section from Boston. However the figures cannot be reproduced in India. If the frequency of caesarean deliveries can be reduced without compromising the fetus, significant reductions not only in caesarean section mortality rates but in overall maternal mortality rates as well may be achieved. Rubin et al (1981) found that mortality following caesarean section was 10 times higher as compared to that following a vaginal delivery.

In this series, the maternal mortality rates are yet high. So one cannot take this operation lightly and care must be taken to review each case before resorting to caesarean section, with good prenatal care, better knowledge of medical disorders and well supervised intranatal care, with the help of a good anaesthesiologist, maternal mortality could be reduced to a minimum.

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