

# ANALYTIC STUDY OF 416 CASES OF CAESAREAN SECTION

(Performed in Lady Goschen Hospital, Mangalore  
From 1958 to 1962)

by

S. C. SAXENA, M.S.

Caesarean section is certainly one of the oldest operations in surgery, with its origin lost in antiquity, and in ancient mythology. The history is that of an operation constantly modified and steadily improved. The present recedes into the past too quickly, and the past becomes remote and legendary, forgotten in the immeasurable advances of the last decade. So is the case of caesarean section. An improved technique, better anaesthesia, and greater recognition of the value of foetal life has resulted in an increase in the incidence of, and indications for the operation, so much so, that many a time it is performed when it is not required.

## *Material for study*

The present study consists of 416 cases of caesarean section performed in Lady Goschen Hospital, Mangalore, from 1st January 1958 to 31st December 1962. There were 249 lower segment sections, 129 classical caesa-

rean sections and 38 caesarean hysterectomies.

## *Observations and results*

*Incidence:* The incidence quoted from various centres varies from 1, to 15% depending on the indications and number of abnormal cases a particular institution has to deal with. During these 5 years there were 11, 719 deliveries, out of which 416 cases were delivered by caesarean section, giving an incidence of 3.53% or 1 in 28.

*Age distribution:* Sixty-seven cases were between the ages of 15-20 years, 243 between 21-30 years, 75 between 31-35 years, 29 between 36-40 years, and only 2 patients were above 40 years. The youngest was 15-years old and the oldest was 42.

*Parity distribution:* Ninety-six (23.2%) were primiparae, 171 between second and fourth parae, 36 fifth parae, and 113 (27.1%) were grand multiparae.

*Income of the patients:* More than half the number of patients (223) had an income of below Rs. 50 p.m., 155 had an income between Rs. 51-100, and only 38 patients had an income above Rs. 100 p.m.

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*\*\*Reader in Obstetric & Gynaecology, Kasturba Medical College, Mangalore.*

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### Indications for the Operation

In some cases more than one indication existed, but for the sake of classification only the main indication is considered. In order of frequency they were, repeat caesarean section, cephalo-pelvic disproportion, placenta previa, rupture uterus, and previous bad obstetric history. Table No. I shows the indications for the operation.

TABLE I  
Indications for Caesarean Section

Indications	No. of cases
Repeat caesarean section .. ..	91
Cephalo-pelvic disproportion ..	75
Placenta previa (51) + Accidental haemorrhage (14) .. ..	65
Rupture of the uterus (30) + Threatened rupture (10) .. ..	40
Bad obstetric history .. ..	25
Incoordinate uterine action .. ..	25
Abnormal presentations .. ..	25
Miscellaneous indications .. ..	70

*Type of caesarean section:* There were 249 lower segment caesarean sections, 129 classical sections, and 38 caesarean hysterectomies. Sterilization was performed on 117 occasions, 23 times with lower segment operation, and 94 times with classical caesarean section.

*Indications for Classical caesarean section:* Table No. II shows the indications. On 43 occasions, where it was done for repeat caesarean section, it was performed by a junior surgeon. The second common indication was placenta previa.

*Repeat caesarean sections:* Repeat operation was performed on 94 cases; 78 had one operation before, 14 had two, and 2 had three caesarean sec-

TABLE II  
Indications for Classical Caesarean Section

Indications	No. of cases
Repeat caesarean with sterilization ..	43
Placenta previa with sterilization ..	30
Accidental haemorrhage .. ..	7
Contraction ring dystocia (with sterilization) .. ..	3
Lower segment not formed .. ..	2
Lower segment having adhesions (with sterilization) .. ..	1
Fibroid in the lower segment (with sterilization) .. ..	1
Miscellaneous indications .. ..	42

tions previously. For non-recurrent indications the patients were given a test labour. Table No. III shows the indications for repeat caesarean section.

TABLE III  
Indications for repeat Caesarean Section

Indications	No. of cases
Contracted pelvis .. ..	86
Failed test labour .. ..	4
Repaired V.V.F. .. ..	2
Bad obstetric history .. ..	1
Stricture of the vagina .. ..	1

*Presenting part at the time of operation:* In 304 cases it was vertex presentation (28 cases occipito-posterior), in 7 cases brow, in 6 cases face, in 1 glabella, in 37 cases breech, in 11 compound presentation, in 37 cases oblique lie and in 13 cases the presentation was not know.

*Dilatation of the cervix at the time of operation:* Cervix was not dilated in 35 cases, fully dilated in 57. In 109 cases vaginal examination was not done.

Table No. IV shows the indications for caesarean section in the 57 cases with full dilatation.

TABLE IV  
*Indications for Caesarean Section in cases with fully dilated cervix*

Indications	No. of cases
Rupture uterus .. .. .	23
Cephalo-pelvic disproportion ..	11
Brow presentation .. .. .	7
Threatened rupture of the uterus ..	5
Contraction ring .. .. .	3
Oblique lie with bad obstetric history	2
Hand prolapse with tonic uterine contraction .. .. .	2
Hand prolapse with failure of internal podalic version .. .. .	1
Repaired V.V.F. .. .. .	1
Stenosis of the vagina .. .. .	1
Deflexed head .. .. .	1

*Condition of the membranes at the time of operation:* In 121 cases the bag of membranes was absent in 51 cases the placenta was presenting, and in the rest of the cases the membranes were intact at the time of operation.

*Caesarean section in cases of placenta previa:* There were 14 cases with placenta previa type II posterior, 13 with placenta previa type III, and 24 cases with placenta previa type IV. In 9 other patients type I placenta previa was present, but the indication for the operation was different.

*Interval between the commencement of labour and the operation:* Table No. V shows the time interval and the distribution of cases.

#### *Anaesthesia used*

In 309 cases the operation was performed under general anaesthesia using intravenous sodium pentothal for

TABLE V

*Interval between commencement of Labour and the Operation*

Commencement of labour-operation interval	No. of cases
0-1 hour .. .. .	110
1-12 hours .. .. .	154
13-24 hours .. .. .	63
25-48 hours .. .. .	57
Above 48 hours .. .. .	32

the induction and gas, oxygen and muscle relaxants for the maintenance. In 97 cases heavy nupercaine spinal anaesthesia was used. In 5 cases the operation was performed under local anaesthesia (novocaine) and in other 5 cases under local and general anaesthesia.

In 51 cases the foetal heart was absent before the commencement of the operation.

*Other operations done along with caesarean section:* In 117 cases sterilization was performed. In one case myomectomy was done and in one case the incisional hernia was repaired.

*Caesarean Hysterectomies:* Caesarean hysterectomy was done in 38 cases, giving an incidence of 0.3%. The indications were rupture uterus in 30 cases, atonic post-partum hemorrhage in 2 cases, Couvelaire uterus in 3 cases, multiple fibroids of the uterus, burrowing of the placenta in the previous caesarean section scar, and damaged uterus, one case each.

*Rupture of the previous Caesarean section scar:* Rupture of the classical caesarean section scar was noted on 3 occasions, and of the lower segment scar on one occasion. In three cases classical caesarean section, with repair of the tear and sterilization, was

performed, and in one case caesarean hysterectomy was done.

TABLE VI  
*Maternal Morbidity*

### Infants

There were 246 male infants and 176 female; out of these 305 weighed more than 5½ lbs. at the time of birth (there were 6 sets of twins).

Weight above 5½ lbs: Males 173  
Females 132

Weight below 5½ lbs: Males 73  
Females 44

### Still-birth rate

There were 71 still-births, 22 of these being premature. In 56 cases the foetal heart was absent at the time of the operation. The corrected still-birth rate was 3.6%.

In the same period there were 760 total still-births. Thus the caesarean section still-births formed 9.3% of the total still-births.

### Neonatal deaths

There were 11 neonatal deaths, 5 due to prematurity (weight below 3 lbs.), 3 due to hyaline membrane disease, 2 due to severe asphyxia and one due to congenital malformations.

The gross perinatal mortality was 82 or 19.7%, and the corrected perinatal mortality was 6.0%.

*Maternal morbidity:* This was present in 190 cases (46%) Table No. VI shows the maternal morbidity.

### Maternal Mortality

There were 14 maternal deaths, giving an incidence of 3.3%. Out of

Maternal morbidity	No. of cases
Fever above 100°F .. ..	136
Distension of abdomen .. ..	23
Urinary infection .. ..	20
Stitch abscess .. ..	15
Shock .. ..	7
Post-partum haemorrhage .. ..	7
Peritonitis .. ..	5
V.V.F. .. ..	5
Pulmonary infection .. ..	3
Peripheral circulatory failure .. ..	2
Diarrhoea .. ..	2
Thrombophlebitis of leg .. ..	2
Convulsions .. ..	1
Mumps .. ..	1

these, 13 were emergency admissions, 12 being admitted in a condition of shock; 8 patients died of shock (placenta previa type IV 2, Couvelaire uterus 3, accidental hemorrhage 1, rupture uterus 1, repeat caesarean section case going into irreversible shock I,) 2 cases died of peritonitis (both cases of rupture uterus), one died of peripheral circulatory failure (rupture uterus), one died of hypofibrinogenemia and hyperkaelemia (diabetic patient), and one died due to accidental ligation of both the ureters (case of rupture uterus). Most of these patients could have been saved had we sufficient amount of blood at hand.

One patient died before operation could be completed due to cardiac arrest (anesthetic complication).

### Summary

A series of 416 cases of caesarean section performed in Lady Goschen Hospital (Mangalore) during five years is presented.

There were 129 classical caesarean section, 249 lower segment operations, and 38 caesarean hysterectomies.

The main indications for the operation were, repeat caesarean section, cephalopelvic disproportion, placenta-  
praevia, rupture uterus and previous bad obstetric history.

The still-birth rate was 3.6%, and the perinatal mortality was 6.0%.

There were 14 maternal deaths, giving a percentage of 3.3.

The cases are analysed according to the various factors affecting the operation.

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