

# A STUDY OF 900 PRIMARY CAESAREAN SECTIONS WITH SPECIAL REFERENCE TO 151 PRIMARY CAESAREAN SECTION IN GRAND MULTIPARAS

by

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A grand multipara is a woman who has delivered five or more viable children. Solomons (1934) called them as "the dangerous multiparas" and since then 'grand multiparity' has been viewed as a clinical entity in its own right (Donald, 1969). Since these women have had previous uneventful labours, a sense of false security prevails in them. There are still many doctors with an attitude of complacence that once a woman had passed through her first pregnancy and labour, 'she had practically nothing to worry about her subsequent childbirths. The indications for 900 consecutive primary caesarean sections have been reviewed in this paper, with special reference to 151 grand multiparas. Women with five or more viable deliveries have been taken as grand multiparas in this study.

### Material and Methods

During the period 1-10-1969 to 31-8-

1974, there were 9441 deliveries in Tirunelveli Medical College Hospital, Tirunelveli, Tamil Nadu. During this period, caesarean sections were performed in 1080 patients, a rate of 11.44%. Of these, there were 900 primary caesarean sections (9.53%) and 180 were repeat sections (1.91%). One hundred and fifty-one grand multiparas were delivered by primary caesarean section, giving an incidence of 1.6% of all deliveries and 16.78% of all primary sections. All primary caesarean sections in grand multiparas were non-elective emergency operations.

### Results

Nineteen per cent of the women delivered in our hospital during the period of study were grand multiparas and 8.42% of all grand multiparas were delivered by primary caesarean sections. Table I shows that there was a higher incidence of primary caesarean sections

TABLE I  
Incidence of Primary Caesarean Section

Parity	Total deliveries	Incidence (%)	Total primary C.S.	Incidence (%)
Total deliveries	9441	100	900	9.53
Young primigravidas	3849	41	303	7.87
Elderly primis (over 30 yrs.)	305	3	97	31.80
Multiparas	3494	37	349	10.00
Grand multiparas	1793	19	151	8.42

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in grand multiparas compared with young primigravidas. This high incidence is probably selective because a grand multipara, unlike a primigravida, delays admis-

sion until certain complications requiring operative delivery have occurred. The parity varied from 5 to 13 and the mean parity was 6.9. The average age was 32.6 years and the age varied from 22 to 43 years.

Since caesarean sections were often required because of multiple indications, cases with several indications have been carefully scrutinised and the principal indications have been shown in Table II.

(72 cases) and antepartum haemorrhage (70 cases). Caesarean sections were done for foetal indications in only 4.6% of grand multiparas, compared to 28.75% in primigravidas. Elderly primiparity was the commonest foetal indication in primis. Table III shows that there were four maternal deaths amongst 151 grand multiparas delivered by primary caesarean sections. All these deaths occurred in patients who were admitted with intrapartum sepsis after being badly handled

TABLE II  
Principal Indications for Primary Caesarean Sections

Principal Indications	Grand-multiparas (151)	Multiparas (349)	Primi-gravidas (400)
I. ANTE-PARTUM HAEMORRHAGE:	70 (46.4%)	113 (32.4%)	37 (9.25%)
a. Placenta praevia	60	102	27
b. Accidental haemorrhage	10	11	10
II. OBSTRUCTED LABOUR:	72 (45.6%)	184 (52.7%)	225 (56.25%)
A. Foeto-pelvic disproportion	19 (12.5%)	47 (13.5%)	131 (32.75%)
B. Malpresentations	40 (24.5%)	114 (32.6%)	56 (14.0%)
a. Transverse lie*	16	50	17
b. Breech*	10	24	12
c. Brow, Face and Glabella	10	24	20
d. Posterior parietal	6	11	4
e. Compound	2	5	3
C. Soft Tissue Dystocia	13 (8.6%)	23 (6.6%)	38 (9.5%)
a. Cervical dystocia**	11	18	36
b. Prolapse uterus	1	3	1
c. Myoma uterus	1	0	0
d. Others	0	2	1
III. FOETAL INDICATIONS:	7 (4.6%)	32 (9.2%)	114 (28.75%)
IV. MISCELLANEOUS:	2***	20	24

\* Excluding the cases associated with placenta praevia.

\*\* Excluding the cases associated with prolapse uterus.

\*\*\* Uterine inertia and Cancer Cervix: One case each.

This Table shows that dystocia and antepartum haemorrhage were the principal indications for primary caesarean sections in 94% of grand multiparas, compared to 65.5% in primigravidas and 85.1% in multiparas. There were almost equal number of patients with dystocia

outside. Table IV shows the particulars of perinatal deaths in relation to birth weight and parity. The perinatal mortality rate was about  $2\frac{1}{2}$  times greater in grand multiparas than in primigravidas delivered abdominally. There were 26 perinatal deaths among 151 grand

multiparas delivered by caesarean section performed for maternal rather than foetal (17.2%). All caesarean sections were indications, as shown in Table V.

TABLE III  
Maternal Mortality in Primary Caesarean Sections

Cause of Death	Total	Grand multi-paras	Multi-paras	Primi-gravidas
1. Septic shock	13	4	4	5
2. Haemorrhagic shock	3	0	3	0
3. Fulminant eclampsia	1	0	0	1
4. Coagulation failure	1	0	0	1
5. Acute dilatation of stomach	1	0	1	0
6. Anaesthetic causes	1	0	1	0
Total maternal deaths	20	4	9	7
Total primary caesarean sections	900	151	349	400
Maternal mortality rate	2.22%	2.67%	2.58%	7.75%

TABLE IV  
Perinatal Mortality in Primary Caesarean Sections in Relation to Parity and Birth Weight

Birth weight (Kg.)	Total	Grand multiparas	Multi-paras	Primi-gravidas
2.0 and less	43	13	19	11
2.1 to 2.5	27	7	13	7
2.6 to 3.0	23	5	13	5
3.1 to 3.5	6	1	3	2
3.6 to 4.0	3	0	2	1
Total Perinatal deaths	102	26	50	26
Total Caesarean sections	900	151	349	400
P.N.M. Rate	11.3%	17.2%	14.3%	6.7%

TABLE V  
P.N.D. in Grand Multiparae in Relation to Principal Indications for Caesarean Section

Principal indication for C.S.	Total C.S.	Foetal loss			%
		2.5 kg. & less	Over 2.5 kg.	Total	
1. Placenta praevia	60	10	0	10	16.7
2. Accidental haemorrhage	10	2	1	3	30.0
3. Foeto-pelvic disproportion	23	1	2	3	13.0
4. Transverse lie	16	1	0	1	12.5
5. Breech	6	1	0	1	16.7
6. Other malpresentations with threatened rupture of uterus	14	2	1	3	21.4
7. Cervical dystocia	11	2	1	3	27.3
8. Cancer cervix	1	1	0	1	100.0
9. Foetal indications	7	Nil	Nil	Nil	Nil

### Discussion

The reported incidence of grand multiparity varies from 1.6% (Oxorn, 1955) to 30.5% (Dutta, 1970), depending on the criteria used to define grand multiparity. In this series, the incidence was 19% which is similar to the incidences reported by Parikh (17.1%) and Dey and Das (16.7%). Donald (1969) has stressed that the primary caesarean section rate in grand multiparas is as great as in less parous women, because of a wide variety of complications. The primary caesarean section rate in grand multiparas varies from 1.2% (Schram, 1954) to 15.9% (O'Sullivan, 1963). In this study it was 8.42% and this agrees with Barn's (1953) incidence of 6.88%. Chakrabarty (1971) reported that 8.6% of caesarean sections were done in grand multiparas, and in Kasturi Lal's (1972) series, 34.7% of all caesarean sections were done in grand multiparas. In this series there were 16.73% grand multiparas among 900 consecutive primary caesarean sections. These observations show that grand multiparity is a very common obstetric problem, although it is an avoidable high risk obstetric factor. The spectrum of indications for primary caesarean sections changes with advancing parity. As parity advances more and more caesarean sections are done for maternal rather than foetal indications. While dystocia is as common as in the primigravidas, antepartum haemorrhage is a more frequent complication in grand multiparas than in the primigravidas.

### Obstructed Labour

In this series, obstructed labour was the principal indication for caesarean section in 47.6% of grand multiparas compared to 56.25% in primigravidas and 52.7% in multiparas. There was evidence

of impending rupture of the uterus in 20.5% of grand multiparas, compared to 8.75% in primigravidas. Our incidence of 47.6% of caesarean sections for obstructed labour in grand multiparas is comparable with the other reports of 50% by Sen (1967), 45.9% by Jacob and Bhargava (1972) and 57.7% by Kasturi Lal (1972). The causes of obstructed labour varied in the different parity groups. The incidence of cervical dystocia was only slightly decreased in grand multiparas. Obstructed labour was as a result of malpresentations in a large number of multiparas and grand multiparas, whereas contracted pelvis was the most frequent cause of obstructed labour in primigravidas. The reported incidences of malpresentations in grand multiparas vary from 4.8% of Krebs (1956) to 12.6% of Oxorn (1955). Transverse lie is the commonest malpresentation in grand multiparas and our observations are consistent with previous reports. Cephalopelvic disproportion is not infrequent in grand multiparas who have had normal deliveries previously. (Green Armytage, 1928; Solomons, 1934; Barns, 1953; and Donald, 1969). There was a statistically significant increase in the incidence of over sized babies with advancing parity. Our observations clearly indicate that the problem of obstructed labour in grand multiparas with proven good obstetric performance in the past is as common as in primigravidas.

*Placenta Praevia:* Many authors have reported a high incidence of placenta praevia amongst women of high parity. (Solomons, 1934; Eastman and Hellman, 1966; George and Power, 1949; Donald, 1969; Dey and Das, 1974). In our study, placenta praevia was the principal indication for caesa-

rean section in 39.8% of grand multiparas compared with only 6.7% in primiparas. Our incidence is higher than that observed by others. It was 19.2% in Kasturi Lal's series (1972), 25.9% in O'Sullivan's series (1963), 32.4% in Sen's series (1967) and 27% in Jacob and Bhargava's series (1972).

**Accidental Haemorrhage:** In this study, the incidence of accidental haemorrhage showed an increase with parity and this is in conformity with the observations made by Gibbard (1962) and others. The incidence of accidental haemorrhage occurred in elderly grand multiparas. In this study, 6.6% of primary caesarean sections in grand multiparas were done because of this complication, compared to 2.55% in primigravidas. Our incidence of caesarean section for accidental haemorrhage is higher than the reported incidences of 2.9% by Sen (1967), 2.6% by O'Sullivan (1963), and 3.8% by Kasturi Lal (1972).

**Foetal Indications:** The foetal indications for caesarean section include foetal distress (clinically suspected by foetal heart changes and meconium staining of the liquor), cord prolapse, cord presentation, and placental insufficiency syndrome which includes toxæmias, prolonged pregnancy, diabetes, elderly primiparity, etc. There are considerable differences in the attitudes of obstetricians towards caesarean section for a distressed foetus in a grand multipara with enough living children. The transcendent objective of obstetrics is that every pregnancy culminate in a healthy mother and a healthy baby. Hence an ideal obstetrician should not deter to do caesarean section for foetal indications even in a multipara with living children. However, the merits of such an idealistic attitude should be genuinely weighed against the risks of

caesarean section, especially when operative procedures are being undertaken in unfavourable situations. Under such circumstances the author prefers to await vaginal delivery. The reported incidence of caesarean section for foetal indications in grand multiparas vary from 0% in Sen's series, 16.2% in Dey and Das series, and 38.7% in O'Sullivan's series compared to 4.6% in this series.

**Maternal Mortality:** The maternal mortality rate in our series was 2.67%. This is higher than the maternal mortality rate reported by Klein, *et al* (1963) 0.5% and Sen (1967) 2%, and lower than the incidence reported by Kasturi Lal (1972) 3.82% and Jacob and Bhargava (1972) 6%.

**Perinatal Mortality:** The perinatal mortality was significantly higher in grand multiparas delivered by primary caesarean section (17.2%) compared to 6.7% in primigravidas delivered abdominally. It could be explained by the fact that primary caesarean sections were performed in a large number of grand multiparas for maternal rather than foetal indications. The foetal loss in all grand multiparas was as a result of the foetal risks inherent in the indications for caesarean section. Similar observations have been reported by Kasturi Lal (1972), Jacob and Bhargava (1972), Klein *et al* (1963) and Sen (1967).

#### Conclusions

It is concluded that grand multiparity per se is a high risk factor. Dystocia and antepartum haemorrhage are the important complications. It is highly dangerous to expect every grand multipara to deliver normally. A grand multipara in labour should be supervised with utmost vigilance since a wide variety of unforeseen complications may occur in her.

The complacent attitude of doctors should be deplored and the false sense of security prevailing in the minds of grand multiparas should be removed through proper education.

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