

PRIMARY CAESAREAN SECTION IN GRANDMULTIPARAE AT MATER MISERICORDIAE HOSPITAL AFIKPO: A 5 YEAR RETROSPECTIVE STUDY

*EC Ojiyi, *EI Dike, **AU Idrissa

*Departments of Obstetrics and Gynaecology, *Imo State University Teaching Hospital, Orlu, Imo State and **University of Maiduguri Teaching Hospital, Maiduguri, Borno State, Nigeria.*

ABSTRACT

Objectives: To identify the common indications and the outcome of primary caesarian section in grandmultiparae at Mater Misericordiae Hospital Afikpo.

Materials and Methods: The case notes of 69 grandmultiparae who had primary caesarean section at Mater Misericordiae Hospital Afikpo between January 1999 to December 2003 inclusively. The information obtained included age, parity, occupation, height, educational status, booking status, indication for caesarean section, operative and post-operative complications, types of anaesthesia, types of uterine incision, mean blood loss, associated pelvic findings and foetal outcome.

Results: Eighty nine percent (89%) of 69 primary caesarean sections were done emergency procedure. The commonest indications for a caesarean section were dystocia (76.8%), antepartum haemorrhage (17.4%), essential hypertension (10.1%) Puerperal pyrexia (24.6%), haemorrhage (7.2%) wound dehiscence (4.3%) and anaemia (2.9%), were the commonest intra- and post operative complications encountered. The perinatal mortality rate was 153/1000. There were two maternal deaths (29 per 1000).

Conclusion: Health education of the population coupled with better utilization of comprehensive maternity care and family planning facilities are advocated.

Key Words: Caesarean Section, Grandmultiparae.

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INTRODUCTION

Although there is no generally accepted definition of grandmultiparity, most authorities will refer to a grandmultipara as a woman who has five or more viable babies^{1,2}. High parity is still common with serious consequences to the foetus, the mother, the family and the society³. Pregnancy after the fifth delivery is viewed with anxiety, especially by obstetricians in developing countries working with inadequate facilities. Because of the gamut of problems, maternal and perinatal morbidity and mortality are relatively, increased in these group of patients.

Unlike in the developed world, in developing countries the low literacy level coupled with the great desire for large families and reluctance to utilize the few available contraception have resulted to the high incidence of grandmultiparity of above 14.5% in Nigeria⁴.

Progress in obstetric practice in general has resulted in an increased performance of caesarean section⁵. The relative ease with which some grandmultiparae deliver has given rise to laxity on the part of the

Parturient and relaxation of surveillance on the part of the obstetrician, and this has partly contributed to the increased maternal and perinatal morbidity and mortality in this group of patients⁶. With increasing and timely use of caesarean section, the attendant risks of the grandmultiparae can either be completely averted or drastically reduced to the barest minimum⁷.

This study was undertaken to identify the common indications and the outcome of primary caesarean section in grandmultiparae in our environment with a relatively high incidence of grandmultiparity.

MATERIALS AND METHODS

There were a total of 7113 deliveries between January 1999 to December 2003 inclusively, at Mater Misericordiae Hospital Afikpo. Out of these 548 (7.7%) were by caesarean section. 1011 (14.2%) were grandmultiparae out of whom 84 (8.3%) were delivered through caesarean section, of which 72 were primary caesarean section. The case notes of 69 of these grandmultiparae who had primary caesarean section were available for review retrospectively. The information obtained included age, parity, occupation, educational status, booking status,

Correspondence: Dr EE Ojiyi

indication for caesarean section, operative and postoperative complications and foetal outcome.

RESULT

Tables I and II show the distribution of the parturients according to age and parity respectively. The age range in this study was 21-40 years with a modal range of 26-30 years accounting for 62.3% of the cases. Most of the patients (88.4%) were between 21-30 years. The modal parity distribution was para 6 (33.3%) with the majority of the patients (72.5%) between para 5 and 7.

The indications for primary caesarean section in the study group are depicted in table III. Dystocia was the commonest indication occurring in 76.8% of the patients. Antepartum haemorrhage, in the form of placenta praevia (13.0%) and abruptio placentae (4.3%) was the second commonest indication. Fourteen patients had elective caesarean section on account of medical disorders such as essential hypertension and diabetes mellitus, severe pre-eclampsia and bad obstetric history.

Puerperal pyrexia (24.6%), haemorrhage (7.2%), wound dehiscence (4.3%) and anaemia (2.9%) were the common causes of postoperative morbidity as shown in table IV.

The perinatal loss is summarized in table V. There were 5 stillbirths and early neonatal deaths. The perinatal mortality rate was 153 per 1000. Eleven babies had some form of neonatal complications. The most common being neonatal jaundice (4 cases), asphyxia neonatorum (2), ophthalmia neonatorum (I) and birth trauma (I). Two babies had polydactyly while one had exomphalos major.

Majority of the patients, forty two (60.9%), did not have any form of formal education while twenty seven (39.1%) had at least a primary education. 64% of the patients were full-time housewives, while 24% were petty traders. Only 12% were civil servants. 36% of the patients were unbooked and had already prolonged or complicated labour at home prior to presentation.

Sixty-seven patients had a lower segment caesarean section. All unbooked para 10 0 patient who presented with a ruptured uterus following obstructed labour at home had a caesarean hysterectomy. One patient with a retained second twin in transverse lie and prolonged rupture of foetal membranes on presentation had a classical caesarean section.

There were two maternal deaths. The first was in a 38 year old unbooked para 8 - patient with eclampsia. An emergency lower segment caesarean section was performed, but the patient never recovered from the anaesthesia. The second was in a 32 year old unbooked para 5 + 1 with abruptio placentae. An emergency lower segment caesarean section was

Table I: Age Distribution of Study Group

n = 69		
Age (In Years)	Number Of Cases	Percentage
<20	---	---
21 25	18	26.1
26 30	43	62.3
31 35	6	8.7
36 40	2	2.9

Table II: Parity Distribution of Study Group

n = 69		
Parity	Number of Cases	Percentage
Five	18	26.1
Six	23	33.3
Seven	9	13.0
Eight	7	10.1
Nine	6	8.7
Ten	4	5.8
Eleven	2	2.9

Table III: Indications for Primary C/S in Grandmultiparae

n = 69		
Indications	Number of Cases	Percentage
Dystocia		
Cephalo-pelvic disproportion	10	14.5%
Occipito-posterior position	6	8.7
Obstructed labour	5	7.2
Transverse/oblique lie	5	7.2
Uterine inertia	4	5.8
Cervical dystocia	3	4.3
Breech presentation	3	4.3
Face (mento-posterior) presentation	2	2.9
Deep transverse arrest	2	2.9
Ruptured uterus	1	1.4
Antepertum Haemorrhage		
Placenta Praevia	9	13.0
Abruptio placenta	3	4.3
Others		
Essential Hypertension	7	10.1
Cord prolapse	5	7.2
Foetal distress (other causes)	5	7.2
Diabetes mellitus	4	5.8
Severe pre-eclampsia/eclampsia	3	4.3
Bad obstetric history	2	2.9

* Multiple indication in most cases

Performed. Postoperatively, the woman developed disseminated intravascular coagulation and died within 6 hours of admission.

There were 77 babies by the 69 grandmultiparae, 67 singletons and five sets of twins giving a twin incidence of I in 14 deliveries. The mean birth weight was 3.1kg with 84% of the babies weighing above 2.5kg.

Table IV: Morbidity and Mortality Associated with Primary Caesarean Section in Grandmultiparae

“n = 69		
Complications	Number of Cases	Percentage
Puerperal pyrexia		
Wound sepsis	6	8.7
Genital sepsis	4	5.8
Urinary tract infection	3	4.3
Malaria	2	2.9
Breast engorgement	1	1.4
Chest infection	1	1.4
Anaemia (post operative PCV <30%)	2	2.9
Haemorrhage		
Intra-operative	3	4.3
Post-operative	2	2.9
Wound dehiscence		
Partial	2	2.9
Complete	1	1.4
Urinary bladder injury	1	1.4
Deep vein thrombosis	1	1.4
Death	2	2.9

* Multiple complications in most cases

Table V: Perinatal loss in Study Group

*n = 72			
Complications	Number of Deaths	Total	Percentage
Stillbirths			
Obstructed labour and transverse life		2	
Cord prolapse	1	5	6.9
Abruptio placentae	1		
Ruptured uterus	1		
Early Neonatal deaths (First I week of life)			
Prematurity	3		
Asphyxia	2	6	8.3
Jaundice	1		

Sterilization by bilateral tubal ligation was performed at caesarean section in 16 patients using the modified Pomeroy's technique, the only indication being completed family size. Informed consent was obtained in all cases.

The average estimated blood loss during the caesarean section was 790ml. Sixteen patients had blood transfusion during or after the procedure.

The overall rate of caesarean section among grandmultiparae in this study of 8.3% compared to 7.7% in the unit during the period covered by the review was not statistically significant, ($X^2 = 0.35$, $P = 0.552$). The average duration of stay after caesarean section was 10 days.

DISCUSSION

Grandmultiparous patients, by virtue of having achieved five or more successful vaginal deliveries, are not ordinarily expected to have much problems in subsequent pregnancies that might necessitate a caesarean section. But this review has shown that this

is not the case as they still have a primary caesarean section rate of 8.3% which is not statistically significant when compared to the 7.7% in the unit generally. This high prevalence might be attributed to a number of factors. Cephalopelvic disproportion (CPD), malpresentation and malpositioning as causes of difficult labour and indications for caesarean section are common among grandmultiparae as shown in this review. This was also the observation of other workers^{8,9}. Cephalopelvic disproportion as a cause of difficult labour in grandmultiparae has been explained as being due to the tendency for babies to get larger with successive pregnancies¹⁰. Occasionally contracted pelvis can secondarily occur in the grandmultipara as a result of the high angle of pelvic inclination resulting from associated lordosis of the spine, the occasional subluxation forwards of the sacrum upon the sacro-iliac joint so that the sacral promontory advances and the true conjugate is effectively reduced and finally osteomalacia which accompany age and high parity¹. Malpresentations are favoured by a pendulous abdomen and lordosis of the lumbar spine. Twin pregnancy is about three times as common in grandmultiparity, and this can be partly explained by the patients high degree of fertility¹. Cord prolapse is favoured by the increased frequency of malpresentation, malposition, and twins in these women.

Antepartum haemorrhage constituted 17.3% of cases recorded in this series. This is largely a complication of multiparity^{11,12}, and in a comparative study in Saudi Arabia occurs more commonly in grandmultiparae when compared to nulliparae¹³.

Uterine rupture constitutes one of the gravest risks of multiparity¹. Uterine contractions tend to be better co-ordinated and more forceful in multiparous labour, whereas the strength of the myometrium to withstand any obstruction has been weakened by successive pregnancies. Moreover, the presence of a large baby further increases the strain. This can be averted by timely resort to caesarean section. The incidence of uterine rupture in this series is 1.4% which is slightly lower than the 2% recorded elsewhere¹⁴.

Caesarean hysterectomy was performed on the only grandmultipara with uterine rupture in this review and this was the best way to avert a mortality, as a repair would be time consuming and the postoperative period more stormy.

Grandmultiparae, on account of their age, have a high incidence of medical complications in pregnancy^{6,7}. Essential hypertension and diabetes mellitus constituted the main medical indications for caesarean sections in this series.

The high incidence of grandmultiparity in this study

Amongst predominantly illiterate patients from low socio-economic strata compares well with that reported in communities of same background^{2,6}. It is envisaged that improved educational services and provision of free family planning counseling and services will eventually limit the family size and ultimately our caesarean section rate as was the experience in Dublin¹³. The perinatal mortality of 153 per 1000 in this study is significantly higher than 35 per 1000 in the hospital ($X^2=80.37$, $p<0.001$). Most of the deaths occurred in unbooked patients without antenatal care. Most of the deaths are attributable to placental abruptio and obstructed labour and ruptured uterus. It is hoped that if all parturients book for antenatal care when those at risk can be detected early and timely caesarean section performed, perinatal mortality rate will drop. Primary caesarean section in the grandmultiparae has been shown in this review to be relatively safe and well tolerated as in women of lesser parity^{8,15}. The maternal mortality in this review of 29 per 1000 is significantly higher than 4 per 1000 the rate in the unit during the period of the study. ($X^2 = 17.75$, $p<0.001$). These deaths occurred in unbooked patients.

Early booking for antenatal care and hospital delivery could have averted these deaths. Grandmultiparae with many previous vaginal deliveries may become overconfident and may not seek hospital supervision of their subsequent pregnancies until very late when complications might have supervened.

Tubal ligation at caesarean section after a prior informed consent is a common feature of modern obstetric practice¹⁶. This practice eliminates risks of future bad obstetric outcome. Caesarean section will continue to be employed in the management of the grandmultiparous pregnancy.

In conclusion grandmultiparity can endanger the lives of both the mother and fetus and caesarean section will ever constitute a way of averting some of these problems.

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