

Pattern and Outcome of Higher Order Caesarean Section in a Secondary Health Facility in Nigeria

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Abstract This study was done to determine the rate, pattern and outcome of higher order caesarean section among parturient in a secondary health facility. A- 5 year retrospective study of the clinical records and delivery registers of all parturient that had caesarean section in Mile 4 hospital, Abakaliki between January 1, 2006 and December 31, 2010. The overall caesarean section rate was 10.5%. The rate of higher order caesarean section per total caesarean section was 14.4% and total delivery was 1.5%. Of the 156 higher order caesarean section, 110(70.5%) were done as emergencies and 29.5% as elective. The perinatal mortality rate from emergency higher order caesarean section was high (98.2/1000). There was no perinatal death from elective caesarean section. The maternal mortality ratio from emergency higher order caesarean section was 1282/100,000 and no maternal death was recorded with elective caesarean section. The proportion of higher order caesarean section that was done as an emergency was high with associated fetomaternal morbidity and mortality. There is the need to enlighten the public on the danger of trying vaginal delivery after two or more caesarean sections.

Keywords Higher Order Caesarean Section, Pattern, Outcome

1. Introduction

The risk of uterine rupture after two previous lower segment Caesarean section is high[1]. This is even higher after three or more lower segment caesarean sections. This risk is even more obvious in our environment with paucity of facility for monitoring uterine contractions and effective intervention[2]. More so, our populace have an aversion for surgeries, with morbid fear for death and pain during and after surgeries. This is made more serious when stories of those that have died following surgical procedures are repeatedly mentioned as a result of our poor health facilities and lack of adequate specialist care.

While there are divided opinions about vaginal birth after two previous lower segment caesarean sections, it is clear that the risk after three or more lower section caesarean section is tremendous that almost if not all obstetricians would prefer elective repeat lower segment caesarean section[3-6].

Elective repeat lower segment caesarean section is associated with better maternal and perinatal outcome, less blood loss and less blood transfusion compared with emergency repeat lower segment caesarean section[7,8].

In our environment with aversion to caesarean section[8, 9], most women after first two caesarean sections will do everything to avert another one to their detriment. Some will not book while others may book late.

Some may change health facility without disclosing their obstetric history to the new health care giver. Others may go to prayer houses to deliver their babies because of the general ignorance in many churches involving their ministers and the memberships. These pregnant mothers end up with morbidities and mortalities. The few that survive it attribute it to divine intervention, encouraging others to follow in their stead.

All these hinder elective repeat caesarean section in favour of emergency repeat caesarean section sometimes with associated complication of uterine rupture.

Inadequate patient counseling also make them ignorant of the danger of trying labour after two lower segment caesarean sections. Many are actually advised against going back to the hospitals pointing out to them that their mothers had them without surgery.

There is paucity of literature on higher order caesarean sections. No such study has been carried out in our environment, hence, the need for this study to examine the pattern and outcome of higher order caesarean sections.

2. Methodology

This study was carried out at Mile Four hospital, Mile

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Four Hospitals was established in 1946 as a leprosy center with maternal and child health unit primarily to cater for pregnant leprosy patients and their children.

It has since expanded to include facilities for maternal and child health while still maintaining separate sections for leprosy and Tuberculosis.

The maternity section has 53 beds in the Antenatal ward, 54 beds in the postnatal ward, six beds in the first stage room, eight beds in second stage room, and 13 beds in private/semi-private rooms. An average of 2,442 deliveries are conducted annually. It has the highest delivery rate among all the health facilities in Ebonyi State.

It has three consultant obstetricians, three specialist senior registrars, two registrars, one chief medical officer, and two medical officers' three youth Corper doctors i.e. newly qualified doctors doing the compulsory one year national service) and many experienced nurses and midwives.

3. Methods

A- five year retrospective study of clinical records and delivery registers of all patients that had caesarean section in Mile four hospital, Abakaliki between January 1, 2006 – December 31, 2010 was undertaken. Data on the number, type of caesarean section, nature of caesarean section (emergency or elective), booking status, parity, foeto-maternal outcome and blood transfusion, were obtained and analyzed.

Statistical analysis

The Statistical package SPSS 16 was used. Values were represented in simple percentages.

4. Results

There were a total of 10,300 deliveries over the period of study and a total of 1,083 caesarean sections with caesarean section rate of 10.5%.

There was a total of 156 higher order caesarean sections, with a higher order caesarean section rate of 1.5% per total delivery. The rate of higher order caesarean section per total caesarean section was 14.4%.

Out of the 156 women who had higher order caesarean section, 124 (79.5%) were booked, 20.5% were unbooked. 82.7% (129) were Para 1-4 and 17.3% were grandmultipara. Out of the 156 higher order caesarean sections, 110(70.5%) were emergencies, 46(29.5%) were elective. The number of elective caesarean sections rose gradually over the year while that of emergency caesarean section declined steadily as shown in table 3.

The third degree caesarean section formed the highest number of higher order caesarean section, 98(62.8%). Fourth degree caesarean section accounted for 40(25.6%) while fifth degree caesarean section accounted for 18(11.6%), table 5.

The total number of babies delivered were 160; 112(70%)

from emergency caesarean sections and 48(30%) from elective caesarean sections. Eleven babies that suffered fresh still births were from emergency caesarean sections but none from elective caesarean sections. Perinatal mortality rate from emergency caesarean section was 98.2/1000.

Twenty six (16.3%) babies from emergency caesarean section suffered birth asphyxia and two (1.3%) babies from elective caesarean section suffered birth asphyxia. Two women who had emergency caesarean section died giving a maternal mortality ratio of 1,282/100,000. There was no maternal death from elective caesarean section.

Eleven uterine ruptures were recorded, five from $\geq 5^{\text{th}}$ degree caesarean section; three each from third and fourth degree caesarean sections respectively.

Table 1. Demographic characteristics of parturients

Age(years)	No	%
<16	0	0
16-20	0	0
21-25	6	3.9
26-30	47	30.1
31-35	76	48.7
36-40	22	14.1
41-45	5	3.2
Total	156	100
Parity	No	%
0	0	0
1-4	129	82.7
≥ 5	27	17.3
Total	156	100.0

Table 2. Booking Status

Booking status	NO	%
Booked	124	79.5
Unbooked	32	20.5
Total	156	100.0

Table 3. Trends of Caesarean Section (CS) Rate

Years:	2006	2006	2007	2008	2010	Total
T.D:	1639	1728	2220	2260	2453	10,300
T.CS	205	185	275	244	174	1,083
T.HCS	35	21	22	32	36	156
	(17.1%)	(11.4%)	(8%)	(13.1%)	(20.6%)	

N/B: T.D. =total delivery

T.CS=total caesarean section

T.HCS=total higher order caesarean section

Table 4. Nature of caesarean section (cs)

Nature of cs	NO	%
Em cs	110	70.5
El cs	46	29.5
Total	156	100.0

N/B: Em cs= Emergency caesarean section

El cs = Elective caesarean section

Table 5. Degree of Higher Order Caesarean Section

Degree	NO	%
3 ⁰	98	62.8
4 ⁰	40	25.7
≥5 ⁰	18	11.5
Total	156	100.0

N/B: 3⁰= third degree
4⁰= fourth degree
5⁰= fifth degree

Table 6. Caesarean Section and Blood Loss

Blood loss(ml)	<500	500-1000	≥1000
Type of cs			
Em	11	52	47
El	7	27	12

N/B: Em= Emergency caesarean section
El = Elective caesarean section
Cs = caesarean section

5. Discussion

Though literature search did not reveal any previous study on higher order caesarean section, the proportion of higher order caesarean section of 14.4% in relation to total caesarean section is high. 70.5% of higher order caesarean sections (hoc) were emergencies. High rate of emergency caesarean section has been reported in other parts of Nigeria[3, 8].

Strong aversion to caesarean section is responsible for high rate of emergency caesarean section[1, 9, 10, 11]. Many factors contribute to this which includes superstitious beliefs that you are not a fully fledged woman if you have your babies by caesarean sections, or fear of not waking up following anaesthesia. These anaesthetic deaths used to occur in the days when we did not have enough qualified anaesthetists, but used mostly technicians. Poverty was another major contributor. Many of our patients were not able to pay their hospital bills. Others were those out of fear or been dubbed as lacking in faith and ignorant of the real religious teachings, go to churches to deliver their babies. Also, their not well informed ministers encourage them to refuse surgery.

The rate of higher order caesarean section steadily declined from 2006(77.1%) to 61.1% in 2010. The number of consultants in the hospital increased from one in 2006 to three in 2010 and this might be responsible for the steady decline in the number of higher order caesarean section. The decrease in the work load per consultant may have given room for consultants to properly select and conduct successful vaginal births after caesarean section (VBAC).

The high perinatal and maternal morbidity and mortality from emergency caesarean section in this study is similar to other studies[1, 10, 11]. The percentage of hoc declined steadily from 62.8% for 3⁰ caesarean section to 11.5% for ≥ 5⁰ caesarean section.

Most obstetricians will counsel their clients to terminate their reproductive careers after four caesarean sections. But the quest for large family size propels women in this

environment to undergo five or more caesarean sections. This is to make room for those children that will die or in the traditional African setting where a large family size is encouraged to confront the various needs of the family. Improvement in surgical techniques and antibiotic therapy enhance better wound healing and therefore indirectly encourage higher degree caesarean sections.

Emergency caesarean section just like in this study is associated with greater blood loss and higher blood transfusion rate. This is because elective caesarean section is better planned and performed by more competent personnel with higher and better skills. These competent personnel's are available in the day time when these elective surgeries are planned. This is against the emergency caesarean sections which may come up at nights when the very skilled hands have gone, thereby increasing operating time[12, 13].

6. Conclusions

Higher order emergency caesarean section in this study is very high-70.5%. Higher order caesarean section can be safer if done as elective cases. Education on the danger of vaginal birth after two or more caesarean sections is imperative to avert the catastrophe associated with it[14, 15].

REFERENCES

- [1] Ezechi OC; Fasubaa OB; Kalu BE; Nwokoro CA & Obiesie LO. Caesarean delivery: why the aversion. *Trop J Obstet Gynaecol* 2004; 21(2): 164-167.
- [2] Njokanma FO, Egri-Okwaji MT, Nwokoro CA, Onebanjo T, Okeke GC. Birth Asphyxia, perinatal & maternal mortality associated with caesarean section.
- [3] *Trop J Obstet Gynaecol* 2002; 19: 25-29. Megafu U. Hazards of vaginal delivery after two previous caesarean section. *Trop J Obstet Gynaecol* 1988; 1: 86-88.
- [4] Meelan FP, Rafia NM, Bolaji II. Delivery following previous caesarean section. In: John Studd (Ed). *Progress in Obstetrics & Gynaecology*, Vol 10 Churchill Livingstone, London 1993; pp213-227
- [5] Chattopadhyay SK. Planned Vaginal delivery after two previous caesarean sections. *Br J Obstet Gynaecol* 1994; 101: 495-500.
- [6] Okpere EE, Oronsaye AU, Imoedemihe DAH. Pregnancy and delivery after caesarean section: a review of 494 cases, *Trp J Obstet Gynaecol* 1992; 1: 86-88
- [7] Mutihir JT, Daru PH, Ujah IAO. Elective Caesarean section at Jos University Teaching Hospital. *Trop J Obstet Gynaecol* 2005; 22(1)
- [8] Onwuzurike BK, Onah HE. Caesarean section in Twin Pregnancies in Enugu, Nigeria. *J of College of Medicine* 2004; ((1): 8-11.

- [9] Ibekwe PC, Obuna JA. Appraisal of Indications for Caesarean sections in Abakaliki, Nigeria. *Trop J Obstet Gynaecol* 2006; 23(2): 150-152
- [10] Swende TZ. Emergency Caesarean section in a Nigerian tertiary health care center. *Nig J Medicine* 2008; 17(4): 396-399.
- [11] Iloabachie GC, Agwu S. The increasing incidence and declining mortality of ruptured uterus in Enugu. *J Obstet Gynaecol* 1990, 10: 306-311
- [12] Rashid M, Rashid RS. Higher order repeat caesarean sections: how safe are five or more? *BJOG*. 2004; 111(10): 1090-1094.
- [13] Alchalabi HA, Amarin ZO, Badria LF, Zayed FF. Does the number of previous caesarean deliveries affect maternal outcome and complication rates? *East Mediterr Health J*. 2007; 13(3): 544-550.
- [14] Qublan HS, Tahat Y. Multiple caesarean section. The impact on maternal and fetal outcome. *Saudi Med J*. 2006; 27(2): 210-214.
- [15] Sobande A, Eskandar M. Multiple repeat caesarean sections: complications and outcomes. *J Obstet Gynaecol Can*. 2006; 28(3): 193-197