Appraisal of Indications for Caesarean Sections in Abakaliki, Nigeria

Perpetus C Ibekwe and Johnson A. Obuna
Department of Obstetrics & Gynaecology, Ebonyi State University Teaching Hospital, Abakaliki, Nigeria.

Abstract
Context: Caesarean section rate has been on the increase in recent times, despite the morbidity associated with it.
Objective: To assess the caesarean sections rate in Abakaliki, Nigeria and critically appraise the indications.
Patients and Methods: A retrospective review of caesarean sections performed at the EBSUTH, Abakaliki over a three- year period (January 2000- December, 2002) was done.
Results: Of the 1,210 deliveries, 233 were by caesarean sections, giving a caesarean section rate of 19.3%. The commonest indication was cephalopelvic disproportion, followed by fetal distress 21.0%, poor progress/prolonged labour 10.7%, and placenta praevia 10.3%. Thirty five percent of the cases were unbooked while 84.1% were emergency procedures. Sixty three percent of the procedures were performed by doctors of the Registrar cadre. The perinatal mortality rate and maternal mortality ratio were 188.8 per 1000 total births and 5,150 per 100,000 respectively.
Conclusion: The caesarean section rate of 19.3% is high but compared favourably with what obtains in other hospitals. Some of the sections might not be indicated if facilities for fetomaternal monitoring and requisite manpower were available and properly utilized. There is great need for review of cases by senior doctors before embarking on caesarean section. The need for antenatal care and hospital delivery are highlighted.

Key Words: Caesarean Section Rate, Indications, Appraisal [Trop J Obstet Gynaecol, 2006, 23:150-152]

Introduction

There has been an increase in caesarean section rate in Nigeria[1]. Published reports indicate that caesarean section rate currently ranged between 18.3%-34.6%[2-6]. The commonly cited indications for the increased rate include, over diagnosis of cephalopelvic disproportions, fetal distress in labour, avoidance of trauma in breech presentation, poor progress in labour and repeat sections[7-9]. In developing countries, especially Nigeria, there is great dislike and aversion for caesarean section and women offered section usually abscond in subsequent pregnancies only to report to hospital when rupture had occurred. Caesarean sections have been clearly shown to be a major contributor to uterine rupture in our environment[7-9]. It is also associated with high maternal mortality and morbidity[10].

But are some of the indications for these sections justifiable, clear and unquestionable? This study looks at the caesarean section rate in our hospital and critically appraises the indications.

Materials and Methods

The case records of patients who had caesarean sections performed at the Ebonyi State University Teaching Hospital (EBSUTH) Abakaliki, Nigeria, over a three-year period (January 2000 December 2002) were reviewed, to retrieve information pertaining to the indication, parity, booking status, nature of surgery and fetomaternal outcome in the patients.

Results

Between January 2000 and December 2002, 1210 deliveries were conducted. Of these, 233 were by Caesarean section giving a caesarean section rate of 19.3%. However, there was a consistent drop in the trend (see Table1). Sixty-five percent of the patients were booked while 35% were unbooked. Eighty-four percent of the sections were emergency procedures while 16% were done as elective.

The indications for the caesarean sections are shown in Table 2. Cephalopelvic disproportion contributed 25.8%. Other main indications were: fetal distress (21.0%), obstructed labour (10.7%), placenta praevia (10.3%) and two or more previous sections (7.7%).

Table 3 shows the parity distribution: 34.3% were primigravidae, 41.6% multiparae and 24.1% grandmultiparae. Doctors of the Registrar cadre performed 63% of the procedures while Consultants did 37%. Thirty-seven percent (87/233) of the patients received blood transfusion while 14.6% (34/233) had postoperative complications-wound infections, wound dehiscence, anemia. Average hospital stay was 13.7 days.

Eighty-one percent (189/233) of the babies were live births. There were 44 perinatal deaths giving a perinatal mortality rate of 188.8 per 1000 total births by caesarean section. There were 12 maternal deaths giving a maternal mortality ratio of 5,150 per 100,000 by caesarean section.

Discussion

The caesarean section rate of 19.3% is lower than 25% in Enugu, also in Southeastern Nigeria. However, it compares favourably with figures from other centres[1]. There has been no previous record of caesarean section rate in our hospital. The consistent drop in the rate over the study period may be as a result of recruitment of more consultant staff in the department between 2001 and especially in 2002. Thus, there was proper selection of cases for caesarean section.

Some of the reasons adduced from this study for the current rate include, the specialist and referral nature of the hospital, non functioning or lack of expertise to use facilities for assisting deliveries (vacuum extractor, forceps) during the review period, over diagnosis of cephalopelvic disproportion by junior doctors and the fact that many cases were not reviewed by senior doctors before surgery.

A critical appraisal of some of the indications is pertinent. Cephalopelvic disproportion (CPD) constituted the commonest indication for caesarean section, accounting for 25.8%. Over diagnosis of CPD by residents have already

Correspondence: *Dr. P.C. Ibekwe, P.O. Box 1019, Abakaliki 480001, Ebonyi State.*
E mail: *drogoperps@yahoo.com*

Table 1: Caesarean Sections Rate At EBSUTH, Abakaliki

Year	2000	2001	2002	Total
Number of Deliveries	237	352	621	1210
Number of Caesareans	66	78	89	233
Rate (%)	27.9	22.2	14.3	19.3

Table 2: Indications for Caesarean Sections

S/N	Indication	Number of patients	%
1	Cephalopelvic disproportion	60	25.8
2	Fetal distress	49	21.0
3	Obstructed labour	25	10.7
4	Placenta Praevia	24	10.3
5	Two or more previous sections	18	7.7
6	Transverse/oblique lie	17	7.3
7	Pregnancy induced hypertension	13	5.6
8	Prolonged labour/poor progress	11	4.7
9	Breech presentation	10	4.3
10	Retained second twin	2	0.9
11	Compound presentation	2	0.9
12	Bad Obstetric history	1	0.4
13	Multiple pregnancy	1	0.4
Total		**233**	**100%**

Table 3: Parity Distribution

Parity	Number of Patients	%
1	80	34.3
2	49	21.0
3	28	12.0
4	20	8.6
>5	56	24.1
Total	**233**	**100**

been mentioned as a reason for this high figure, an observation also noted by Makinde[11].

Fetal distress has continued to be a major contributor to high caesarean section rate [12-14], accounting for 21.0% in this study. The use of clinical signs of fetal distress alone, as in applicable at EBSUTH, Abakaliki, to determine patients for operative delivery has been seriously criticized as leading to high caesarean section rate [15-17]. Clayton, et al [15] noted that the correlation between these clinical signs of fetal distress and real hypoxia is not very strong; even the most serious combination of these signs (bradycardia with the passage of meconium) is found to be associated with a significantly hypoxic fetus in only 25% of instances. Again, in 70 cases of clinically diagnosed fetal distress delivered by caesarean section, Adeleye[14] found an Apgar score of 7 and above in 31.4% and therefore considered the caesarean section in those women as unjustified assault. Additional monitoring with a combination of continuous electronic fetal heart monitoring or fetal umbilical artery Doppler velocimetry with fetal blood sampling when necessary to confirm any suspicion of hypoxia before embarking on surgery has been shown to reduce significantly the caesarean section rate due to fetal distress[16,17].

Obstructed labour contributed 10.7% of the indications. All cases with obstructed labour were un-booked. Education of the bulk of our women on the need for early booking, regular clinic attendance and hospital delivery is important in this regard.

Two or more previous caesarean section surprisingly contributed 7.7% to the indications, much lower than 25.3% by Ibekwe[6]. This is because obstetricians still regard vaginal births after two previous sections as a high-risk option[12, 18]. But this is no longer the consensus; successful vaginal deliveries after more than one previous section have been reported[19] and it is now being increasingly suggested that trial of labour under close monitoring in selected patients after two previous sections appear a reasonable option[19,20].

The four indications discussed above contributed 65.2% of the reasons for the caesarean sections. Pregnancy-induced hypertension, poor progress in labour and breech presentation accounted for 14.6% of the indications. There should be a liberalized induction policy for patients with pregnancy induced hypertension and prompt augmentation for those with poor progress of labour especially primigravidae (34.3% of the section were done on primigravidae). Partographic labour monitoring should be emphasized as a center-point in labour monitoring as it will help to pick up, very early, those that will require augmentation. Breech presentation should not be seen as an indication for caesarean section. It has been shown that in carefully selected
cases, primigravidae with breech presentation will deliver vaginally [21,22].

Some of the sections were not justified as it was observed that some sections were done in virtually second stage of labour when infact such patients would have benefited from assisted deliveries. This was because of either lack of facility or absence of expertise by junior doctors to undertake the procedure. Also, there was no additional monitoring facility to pick up true fetal distress before proceeding to caesarean section. It is therefore suggested that facilities for assisting the second stage of labour (vacuum extractor, forceps) should be made available and residents well versed in the arts. A senior doctor should review all cases for emergency caesarean section before embarking on surgery. There should be additional monitoring facilities to pick true fetal distress before surgery. Education of our women on the need for early booking and hospital delivery is important, as 34.8% of the patients were un-booked. Finally, the indication for any caesarean section should, not only be clear, but justifiable and unquestionable.

References

1. Ibekwe PC. Rising Trends in Caesarean Section Rates: An Issue of Major Concern in Nigeria. *Niger J Med,* 2004; 13: 180-181.
2. Iloabachie GC, Meniru GI. Trends in Caesarean Section. Niger *J Surg Sci,* 1992; 2: 75-81.
3. Oye-Adeniran BA, Umoh AV, Odum CU, Nnatu SNN. Recent Trends in Caesarean Section at the Lagos University Teaching Hospital, Lagos, Nigeria. *Niger Quart J Hosp Med,* 1998; 8: 111-114.
4. Nkwo PO, Onah HE. Feasibility of reducing Caesarean Section rate at the University of Nigeria Teaching Hospital, Enugu, Nigeria. *Trop J Obstet Gynaecol,* 2002; 19:86-89.
5. Ezechi OC, Nwokoro CA, Kalu BKE, Njokanna FO, Okeke GCE Caesarean morbidity and mortality in a private hospital in Lagos, Nigeria. *Trop J Obstet Gynaecol* 2002; 19:97-100.
6. Ibekwe PC, Tabansi ST. Increase in Caesarean Section delivery at the University of Nigeria Teaching Hospital (UNTH), Enugu, Nigeria. *Sahel Med J,* 2004; 7:6-9.
7. Iloabachie GC, Agwu S. The increasing incidence and declining mortality of ruptured uterus in Enugu. *J Obstet Gynaecol,* 1990; 10: 306-311.
8. Megafu U. Factors influencing maternal survival in ruptured uterus. *Int J Gynecol Obstet* 1985; 23: 475-480.
9. Makinde OO, Akinyemi S.A review of ruptured pregnant uterus. *Trop J Obstet Gynaecol* 1990; 8: 52-54.
10. Adeleye JA. Maternal mortality and Caesarean Section at the University College Hospital, Ibadan, Nigeria (A 2-year study). *Trop J Obstet Gynaecol,* 1982; 3:37-43.
11. Makinde OO. A review of Caesarean Section at the University of Ife Teaching Hospital, Ile-Ife 1982-1983). *Trop J Obstet Gynaecol,* 1982; 6:25-30.
12. Okpere EE, Oronsaye AU, Imoedemihe DAH. Pregnancy and Delivery after Caesarean Section: a review of 494 cases. *Trop J Obstet Gynaecol,* 1992; 1:86-88.
13. Ojo VA, Okwerekwu FO. A critical analysis of the rates and indications for Caesarean Section in a developing country. *Asia-Oceania J Obstet Gynaecol,* 1988; 14: 185-193.
14. Adeleye JA. Caesarean Section for clinically diagnosed fetal distress: an unjustified assault. *Trop J Obstet Gynaecol,* 1987; 6: 37-38.
15. Clayton SG, Lewis TLT, Pinker GD (eds): *Obstetrics by Ten Teachers* (14ed), Edward Arnold publishers, London 1985;pp 308-317.
16. Ayromlooi J, Garfinkel R. Impact of fetal scalp blood pH on the incidence of Caesarean Section performed for fetal distress. *Int.J. Gynecol Obstet,* 1980; 17:139.
17. Somerset DA, Murrils A J, Wheeler T. Screening for fetal distress in labour using the umbilical artery blood velocity waveform. *Br J. Obstet Gynaecol,* 1993; 100: 55-59.
18. Megafu U. Hazards of Vaginal Delivery after 2 pervious Caesarean sections. *Trop J Obstet Gynaecol,* 1988; 1:86-88.
19. Meelan FP, Rafla NM, Bolaji II. Delivery following previous Caesarean section. In: John Stud (ed.) *Progress in Obstetrics and Gynaecology.* Vol.10 Churchill Livingston, London 1993; pp 213-227.
20. Chattopadhyay SK. Planned Vaginal Delivery after two previous Caesarean Sections. *Br J Obstet Gynaecol,* 1994; 101:495-500.
21. Onwudiegwu UA. Survey of Obstetrics complications associated with singleton breech presentation and delivery. *Orient J Med,* 1993; 5: 11-14. Nwosu EC. Undiagnosed breech. Br J Obstet Gynaecol, 1993; 100:531-535.