Are Destructive Operations Still Relevant to Obstetric Practice in Developing Countries?

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Abstract

Context: From our clinical observation, we often see caesarean section being performed in situations where destructive operations would have been more appropriate.
Objective: To determine the proportion of cases of obstructed labour that meet defined criteria for destructive vaginal operation vis-à-vis the proportion that actually undergo the operation.
Study Design, Setting and Subjects: A retrospective audit of all cases of obstructed labour seen at a university teaching hospital in South-Eastern Nigeria, over a fifteen- year period.
Results: Out of 2947 patients presenting with obstructed labour during the study period, 67 (2.3%) met the set criteria for destructive vaginal delivery. Only 11 (16.4%) of these had destructive vaginal operations while the remaining 56 (83.6%) had caesarean section. Consultants were more likely than junior residents to perform craniotomy instead of caesarean section for the same indications ($p < 0.02$). Senior residents occupied an intermediate position. No maternal death occurred in the craniotomy group while three maternal deaths were recorded in the caesarean section group. Rates of infection, blood transfusion, vesico-vaginal fistula and Asherman's syndrome were also higher in the caesarean than in the craniotomy group.
Conclusion: Only one-sixth of women who are suitable candidates for destructive vaginal operations are offered the procedure at the UNTH, Enugu, the rest being delivered by caesarean section, despite the higher complication rate of caesarean delivery in such cases. The reasons for this situation and the ways to either reverse it or else eliminate the need for destructive operations are discussed.

Key Words: Destructive Operations, Obstructed Labour, Fetal Death [Trop J Obstet Gynaecol, 2002, 19: 90-92]

Introduction

Obstructed labour remains a common occurrence in developing countries such as Nigeria[1]. In cases where the fetus is alive, an emergency caesarean section is usually undertaken. However, a dilemma arises when obstructed labour is further complicated by fetal death. Gross sepsis is frequently present and caesarean section increases the risk of maternal morbidity and mortality.

Destructive vaginal operations were devised in an attempt to limit the immediate and long-term complications associated with caesarean delivery for obstructed labour in the presence of intrauterine fetal death. These procedures reduce the size of the fetus to enable vaginal delivery and include craniotomy and decapitation amongst others[2]. In developed countries, they are only of historical interest because of the universal availability of basic obstetric care. From our clinical observation, we often see caesarean section being performed in situations where destructive operations would have been more appropriate.

The objective of this study was to determine the proportion of cases of obstructed labour that meet defined criteria for destructive vaginal operation vis-à-vis the proportion that actually undergo the operation in a tertiary care centre in Enugu, Eastern Nigeria.

Materials and Methods

This was a retrospective review of all patients who qualified for and/or had destructive vaginal deliveries from January 1, 1983 to December 31, 1997 at the University of Nigeria Teaching Hospital (UNTH), Enugu. In the hospital, the following are the criteria for determining whether or not a patient is a suitable candidate for destructive vaginal operation: obstructed labour with intrauterine fetal death, full cervical dilatation, and the absence of uterine rupture, peritoneal abscess or previous uterine scar.

The data analysed included age, parity, booking status, sources of referral, cause of obstruction, rank of surgeon, mode of delivery and complications. Data analysis was by means of simple percentages and chi-square tests at the 95% confidence level.

Results

During the 15-year period, there were 29,228 deliveries, 6563(22.5%) of which were by caesarean section. Out of 2947 patients presenting with obstructed labour, 67 (2.3%) met the criteria for destructive vaginal delivery.

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Only 11 (16.4%) of these had destructive vaginal operations while the remaining 56 (83.6%) had caesarean section. Craniotomy was the only destructive operation performed (Table 1). The mean age was 27.2; SD: 6.1 years. Thirty six percent (36%) of the subjects were primigravidae, 50% were multiparous while 14% were grandmultiparous. Five (7.46%) patients were booked for antenatal care at the UNTH but had been in labour in peripheral centres. All other patients were unbooked. Their sources of referral were as follows:- public general hospital: 11 women (19.0%), public primary health centres: 9 (15.5%), private clinic/hospital: 14 (24.1%), private midwife-run maternity homes: 22 (37.9%). The sources of referral for two women (3.5%) were not stated. Cephalopelvic disproportion and transverse lie were the causes of obstructed labour in 87.6% and 12.4% of the women respectively.

Table 1

Trends in Mode of Delivery of Dead Fetuses Following Obstructed Labour

	1983–87	*1988–92*	*1993-97*	*Overall*
Deliveries	13727	10445	5056	29228
Patients With Obstructed Labour and Fetal Death (OLFD)	21	29	17	67
Craniotomies				
Number	4	5	2	11
% of OLFD	19.0	17.2	11.8	16.4
Per 10^5 Deliveries	29	48	40	38
Caesarean Section for OLFD				
Number	17	24	15	56
% of OLFD	81.0	82.8	88.2	83.6

Table 2 shows that consultants were more likely to perform craniotomy instead of caesarean section than junior residents for the same indications ($p < 0.02$). Senior residents occupied an intermediate position.

There were more complications in the caesarean section group than in the craniotomy group (Table 3). No maternal death occurred in the craniotomy group while three maternal deaths were recorded in the caesarean section group. Rates of infection, blood transfusion, vesico-vaginal fistula and Asherman's syndrome were also higher in the caesarean than in the craniotomy group. However, there was no significant difference in the duration of hospital admission in both groups (22.7 versus 25.6 days, $p > 0.05$).

Table 2

Relationship Between Experience and Mode of Delivery in Obstructed Labour

	Craniotomy	*Caesarean Section*	
Rank of Surgeon	*No (%)*	*No (%)*	*p*
Consultant	3 (27.3)	2 (3.6)	0.006
Senior Registrar	7 (63.6)	26 (46.4)	0.30
Registrar	1 (9.1)	28 (49.1)	0.015
Total	11 (100.0)	56 (100.0)	

Table 3

Complications Associated With Mode Of Delivery in Obstructed Labour

	Craniotomy (N = 11)	*Caesarean Section* (N = 56)
Complication	No (%)	No (%)
Maternal mortality	0 (0.0)	3 (5.3)
Infection	3 (27.3)	25 (44.6)
Blood Transfusion	5 (45.5)	48 (85.7)
Vesico-vaginal Fistula	0 (0.0)	8 (14.3)
Asherman's Syndrome	0 (0.0)	4 (7.1)

Discussion

This review shows that obstructed labour with intrauterine fetal death continues to occur in Nigeria with an incidence of 2.3 per 1000 deliveries. Destructive vaginal delivery was undertaken in only 16.4% of such cases giving an incidence of 38 per 100000 deliveries which is similar to that observed in other developing countries[3]. At the UNTH, Enugu, this represents a three-fold decline when compared to the 120 per 100000 reported by Ozumba for the period 1976-1984[4]. The incidence of these procedures was relatively constant during the three five-year periods reviewed but an increasing preference for delivery by caesarean section was observed (Table 1). This appeared to be related to the experience of the obstetrician undertaking the delivery since craniotomy was performed in 60% of cases managed by consultants compared to 21% for senior registrars and 3.3% for registrars (Table 2). However, consultants handled only 7.5% of the cases.

Craniotomy was the only destructive procedure performed, which suggests that all cases involving fetuses in transverse lie were delivered by caesarean section. Decapitation, which was indicated in such cases, was not carried out probably because of the greater skill required. As shown in Table 3, complication rates were high, irrespective of mode of delivery and appeared related to the condition of the patients on presentation. Expectedly, most were already exhausted, dehydrated and had evidence of infection. However, caesarean delivery was more likely to be associated with generalised sepsis and need for blood transfusion. Furthermore, maternal deaths occurred only in the caesarean section group, a finding consistent with a previous study[5].

When women present with obstructed labour and fetal death, consultant involvement should be sought. This may reduce the proportion of women delivered by caesarean section, thus avoiding its immediate and late complications. Destructive deliveries require experience, which junior doctors are unlikely to possess. Decapitation is particularly demanding technically, and although modifications have been suggested to make it simpler[6], the caseload appears too low to allow for the acquisition and maintenance of skills required for these procedures. Therefore, although destructive deliveries are still relevant when obstructed labour is complicated by intrauterine fetal death, the focus of attention should be on eliminating the need for destructive operations, as has been achieved in developed countries. This would require the presence of trained birth attendants at all deliveries to facilitate an early diagnosis of abnormal progress in labour and referral. All women in this review had been in labour in health facilities meant to provide orthodox maternity care; hence, access did not appear to be a problem. However, inadequate supervision of labour and/or the reluctance of the women to have a caesarean section may have contributed to labour continuing to the point of obstruction and fetal death.

The challenge, therefore, is to ensure that appropriately trained birth attendants adequately staff such health care facilities. One strategy may be to make the routine use of the partograph a pre-requisite for licensing of health care facilities providing intra-partum care. On the other hand, the socio-cultural issues reinforcing women's aversion to caesarean section should be addressed through enlightenment of the community as a whole. In conclusion, only one-sixth of women who are suitable candidates for destructive vaginal operations are offered the procedure at the UNTH, Enugu, the rest being delivered by caesarean section. The reasons for this situation and the ways to either reverse it or else eliminate the need for destructive operations are discussed.

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