

DESTRUCTIVE OPERATIONS IN MODERN DAY OBSTETRICS IN A TERTIARY INSTITUTION: CASE REPORT ON CRANIOTOMY

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ABSTRACT

A case of 19 year old booked primigravida lady at 39 weeks gestation, with obstructed labour, intrauterine fetal death and intrapartum eclampsia is presented. She had craniotomy and was discharged home on 4th post-operative day.

Keywords: Obstructed labor, craniotomy, intrapartum-eclampsia

INTRODUCTION

The advancement of modern obstetric care and increasing rarity of severely contracted pelvises have led to virtually disappearances of obstructed labour in the developed countries.¹ However in Sub-Saharan Africa obstructed labour continues to plague thousands of women each year, accounting for about 8% of all maternal deaths in developing countries including Nigeria.² Obstructed labour is the single most important cause of maternal death and is one of the three leading causes of perinatal mortality³ with the case fatality rate of 87% to 100%.⁴ Obstructed labour result from failure of descent of fetal presenting part due mechanical reasons, in spite of good uterine contractions, and leading to various maternal and/ or fetal complications.⁵⁻⁸ The commonest cause of obstructed labour is cephalopelvic disproportion which may be due to contracted pelvis, macrosomic baby, or fetal malposition; followed by impacted transverse lie.^{2,9,10} other causes include tight perineum or abnormality or tumours of the uterus, ovary or vagina.^{11,12}

Destructive operations performed in a well-selected patient with obstructed labour where the fetus is dead in utero has been found to be superior to caesarean section.^{13,14} A caesarean section may be unjustified in a woman who is desperately ill, has sepsis and probably moribund with a dead fetus.¹⁵ Regretably the arts of destructive operations are rapidly becoming a lost art, due to the fact that few artisans are available today and moreover in most developing countries the standard of living is better and obstetrics is so advanced that those operations are rarely indicated.^{13,16,17} In a country like Nigeria, antenatal care in rural areas is meager and many patients still present late in labour with intrauterine dead fetus, signs of neglected obstructed labour and sepsis in the mother. A caesarean section done in such a situation results in a stillborn baby and a woman with a weak scarred uterus jeopardizing her future obstetric outcome and predisposing her to risk of ruptured uterus.¹³ Bhoumick¹⁸ stressed that as long as we get badly handled and neglected cases we cannot eliminate the need to perform destructive operations.

The health care provider has to decide on the options available to him to deliver the mother by the safest route without causing morbidity and mortality. If the fetus is dead, a destructive procedure can be considered in place of abdominal-route delivery which carries considerable risk to the debilitated mother in neglected labor.

CASE REPORT

The patient was Mrs M.M, a 19 year old booked primigravida who presented to our labour ward with complaints of labour pains of more than 24 hours and multiple convulsions about 1 hour before presentation. She had attempted home delivery under the supervision of a traditional birth attendant (TBA) for more than 24 hours and said have developed sudden three episodes of generalized tonic-clonic convulsions each lasting for about 1minute. This necessitated her relatives to rush her down to our health facility.

Mrs M.M attended her antenatal clinic at our health facility which she booked at 12 weeks gestation. She was regular on her antenatal clinic follow up visits and were uneventful. She was not a known epileptic patient. Her booking blood pressure was 131/75mmHg and height was 154cm.

Physical examination on admission revealed an anxious lady in painful distress, not pale, not jaundiced but was febrile (Temperature 38.5 °C). Mrs M.M was moderately dehydrated, her Pulse rate was 100 beats per minute and Blood pressure was 200/130mmHg. Both heart sounds were normal and the chest was clinically clear.

The abdomen moved with respiration, with no area tenderness. The Liver, Spleen and kidneys were not palpably enlarged. The Urinary bladder was full and had to be drained with an indwelling catheter after disimpacting the fetal head. The Symphysiofundal height was 37cm, longitudinal lie, cephalic presentation and descent was 2/5th palpable per abdomen. The uterine contractions were 4 in 10 minutes each lasting 40 seconds. The fetal was not heard with fetoscope.

There was a slight vulva edema and no vaginal bleeding was seen. The cervix was fully dilated with severe moulding and moderate caput findings noted. A bedside ultrasound revealed intrauterine fetal death and urinalysis showed 3+ of proteinuria and Ketones.

A diagnosis of intrapartum eclampsia with prolonged obstructed labour and intrauterine fetal death in a primigravida was made.

She was immediately stabilized and was given MgSO₄ according to Zuspan regimen, the blood pressure controlled with Hydrallazine and intravenous antibiotics given. Nasogastric tube was inserted to decompress the stomach. The options of Caesarean section and Craniotomy were discussed with the patient and her relatives. The Craniotomy was favored and a written consent obtained.

The procedure was performed in the operating theatre under general anesthesia. Vaginal examination was done to confirm the station and position of the fetal head; and the degree of moulding, caput and cervical dilatation. After emptying the bladder, the fetal was stabilized by an assistant through suprapubic pressure. A cruciate incision was made on the fetal scalp and the Simpson's perforator held closed in the right hand and gently advanced to the sagittal sutures with the index and middle finger guiding its tip. The fetal skull was perforated and the Simpson's perforator opened widely, it was then closed and rotated through 90 degree to facilitate evacuation of the brain tissue. The four flap edges of the cranium were clamped with Kocher's forceps and traction was applied to deliver the fetus as shown in figure 1 . Her immediate post-operative condition was satisfactory.

She was commenced on intravenous antibiotics, parenteral analgesics and oral antihypertensives. The MgSO₄ was continued for 24 hours post-operatively. On second postoperative, patient was commenced on oral feeding and intravenous antibiotic converted to oral preparations. She did remarkably well and was discharged home on 4th day postpartum in good health. The urethral catheter was removed 2 weeks after the procedure during her postnatal follow visit.

DISCUSSION

The “unsupervised –neglected obstructed labour” syndrome is, unfortunately, still common in the developing countries and a major cause of maternal and perinatal morbidity and mortality.^{19,20} Simple live-saving fetal destructive operations like craniotomy, decapitation, evisceration, cleidotomy and embryotomy would have prevented these morbidities and mortalities.²¹ The reported indices of fetal destructive operations vary between 0.2 and 1.6% deliveries.²²⁻²⁵ In 2005 Singhal et al reported 51 destructive operations done for obstructed labour with dead fetus over a period 7 year period and craniotomy accounting for 68.62% of the cases.

Generally there should be an individualized approach to each case of obstructed labor. The health care provider has to decide on the options available to him to deliver the mother by the safest route without causing morbidity and mortality. If the fetus is dead, a destructive procedure can be considered in place of abdominal-route delivery which carries considerable risk to the debilitated mother in neglected labor

Craniotomy is the perforation of the fetal head and is most commonly performed destructive operation.^{13, 24, 25} The use of obsolete crushing instruments, such as the cranioclast and cephalotribe, for cranioclasm and cephalotripsy respectively, are confined to the museums, in its place most obstetricians use Simpsons perforator and apply three to four Kocher's forceps to the fetal scalp (figure 2).^{15,22,26} Craniotomy is indicated in hydrocephalus, retained after-coming head of a dead breech fetus, cephalopelvic disproportion with a dead fetus, and impacted malpresented dead fetus in mento-posterior and brow presentation. The sites of perforation include the anterior fontanelle or suture lines, roof of the mouth, foramen magnum, occipital bone behind the mastoid, orbit and frontal bone depending on the fetal presentations.²¹

Cephalopelvic distortion is the most common indication for craniotomy.^{13,27} Most of the victims of obstructed labour are teenage pregnant women, unbooked primigravida with poor socioeconomic background and lack western education.^{28,29,30} The complications that can arise from craniotomy include atonic postpartum haemorrhage, vaginal and perineal tears, ruptured uterus, wound dehiscence or sepsis and maternal death.^{13,31} Ezugwu et al³² in a 15-year audit of obstructed labors in Enugu Nigeria, found that out of the 2947 cases of obstructed labor that occurred, 67 (2.3%) met the criteria for fetal destructive vaginal delivery, but only 11 (16.4%) had the destructive operations. The remaining 56 (83.6%) had caesarean section with 3 maternal deaths and higher rates of infection, blood transfusion, vesico-vaginal fistula and Asherman's syndrome. There was no maternal death in the destructive delivery group.

Mrs M.M was a 19 year old primigravida who might have also suffered from childhood illness associated with contracted pelvis. Though the pregnancy was booked for antenatal

care; this has a low detection rate for diagnosis cephalopelvic disproportion. Other factors that may have contributed to the patient's complication include lack of fund as her husband has travelled out of town and obsession for delivery at home thinking it is a normal process for a woman.

It was too late by time she was brought to our health facility; after being badly managed by the TBA, she has lost her baby and was in a poor condition. The best option of management for her was destructive operations and thus had an excellent recovery with a very short hospital stay.

CONCLUSION

In properly selected cases presenting late with obstructed labor, IUFD and intrauterine sepsis, such as our patient, destructive operations should be performed as first choice, as they are safer than lower segment caesarean section. The high point of this case is to show that even if destructive operations have no place in modern day obstetrics, it remains an important weapon in the armoury of the third world obstetrician and doctors practicing in developing countries should be aware that craniotomy can be a very gratifying and useful procedure.

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