DELIVERY OF IMPACTED FETAL HEAD AT CAESAREAN SECTION — SURGICAL TECHNIQUE

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SUMMARY

A type of U-shaped incision with a broad base to deliver the impacted fetal head or the neglected shoulder at caesarean section is presented. This incision combined with an assistant dislodging the wedged fetal head upwards before incising the lower segment of the uterus prevented lateral extension into the uterine arteries in 56 patients at the Korle-Bu Teaching Hospital. The surgical technique is described.

Keywords: Impacted fetal head; Caesarean section; Surgical technique.

INTRODUCTION

Uterine incisions are many and varied. Basically, incisions are divided into upper segment and lower segment. The most commonly employed uterine incisions are the low transverse incision originally advocated by Munro Ker [1,2] as far back as 1911 and the vertical incision, originally proposed by Kronig[3]. The low transverse incision is now employed in more than 90% of caesarean deliveries.[4] Other incisions are the classical incision, the J-shaped incision, and the inverted T-incision.[5] These incisions are performed for various fetal or maternal interests.

In Korle-Bu Teaching Hospital, the commonly used incision is the low transverse incision. However, this incision does not create enough space when the head is deeply wedged within the pelvis or in cases of neglected shoulder in labour or poorly formed lower segment. These transverse incisions sometimes extend into the lateral corners involving the uterine arteries resulting in massive blood loss. Before the study, two cases resulted in maternal death and two others ended with uretero-vaginal fistulae when the ureters were caught in-between stitches while trying to control parametrial bleeding following extension of the uterine incision. We have now adopted a type of U-shaped incision with a broad base combined with an assistant pushing the fetal head from below to deliver the impacted fetal head.

This paper discusses the U-shaped incision with a broad base in the delivery of the impacted fetal head or the neglected shoulder in labour.

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PATIENTS AND METHODS

Fifty-six women were delivered by our method out of 5,925 caesarean sections and 30,382 total number of vaginal deliveries between January 1988 and December 1991 at the Korle-Bu Teaching Hospital, Accra. The patients in the study were referred from both Urban and Rural Health Centres, Private Midwives, Traditional Birth Attendants and "Spiritual Houses".

OPERATIVE TECHNIQUE

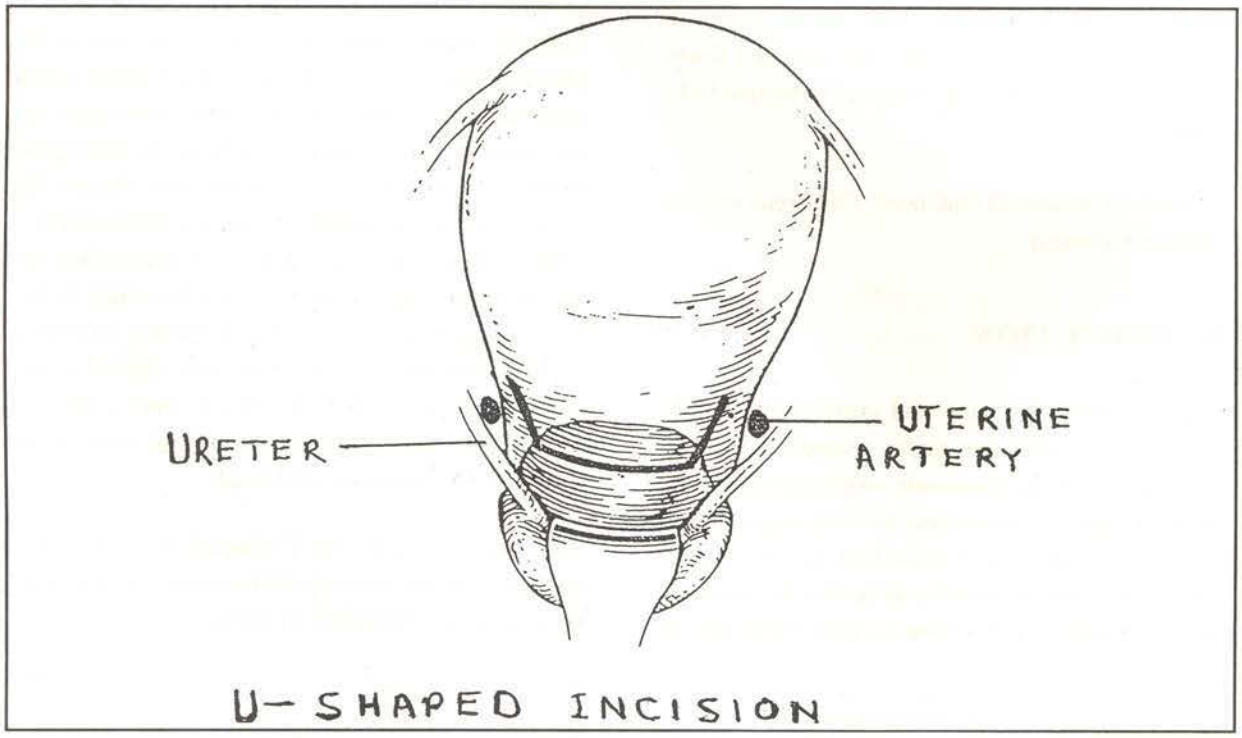
General anaesthesia was used in all the patients. The patients were placed in the dorsal position and cleaned with sterile Bethadine solution. Sterile towels were positioned to leave only the operating area exposed.

A. The abdomen was entered either through a subumbilical or pfannenstiel incision and the uterus palpated to identify dextro-rotation. This prevented cutting inadvertently into the uterine arteries.

B. Before cutting into the uterus an assistant in sterile gloves dislodged the fetal head by applying upward pressure through the vagina until the surgeon felt a sizeable part of the head. This step is essential because air would be sucked into the uterine cavity when the uterus is incised before dislodging the head and further decompress the fetal head making delivery more difficult.

C. A type of U-shaped incision with a broad base was made into the lower segment of the uterus with the convex portion of the incision pointing towards the cervix. With the index and middle fingers placed in the uterus the ends of the incision near the round ligaments were extended about 1.5 to 2.0cm into the upper uterine segment clearly avoiding the uterine arteries(Fig. 1).

Figure 1



D. A hand was inserted into the uterine cavity to elevate the fetal head through the uterine incision. Delivery of the baby and the closure of the abdomen were done in the usual way.

RESULTS

The mean age of the patients was 25 with a standard deviation of 6.2 and a range of 19 to 34 years. The average parity was one. There was no maternal mortality during the study period and review of patients' case notes did not show extension of the incision into the uterine vessels or broad ligament haematoma. Average blood loss was 800 ml. Eleven patients had repeat caesarean section after trial of labour for at least eight hours. There was no evidence of uterine dehiscence or rupture at repeat caesarean section.

DISCUSSION

Caesarean section is probably one of the oldest and certainly one of the most commonly performed surgical procedures in obstetrics. With caesarean section, there can be several ways to achieve the same result, and various conditions would dictate the individualization of technique. Ideally, one should not limit oneself to the same technique under all circumstances but must anticipate problems and avoid undue injury to the mother and infant. The transverse lower uterine segment caesarean section rate is about 16% deliveries in our hospital and is done as a planned elective section or emergency caesarean section. There are no national figures for the incidence of classical caesarean section, or other forms of caesarean section.

Eleven of the patients with our type of "U-shaped" uterine incisions have had trial of labour and caesarean section because of failure to progress without any evidence of uterine dehiscence or rupture. The rest of the patients are being followed closely during subsequent pregnancies and labour to detect any intrapartum complications. Pedowitz[6] in 1957 reported on 403 repeat caesarean sections, finding uterine wound separation in 18.2 per cent of previous classical sections, 12.9 per cent of low vertical sections, and 8.3 per cent of low transverse sections. However, a 1980 literature review by Keeping[7] and associates found the subsequent uterine scar rupture rate of 2 to 4.7 per cent after previous classical incisions, 0.5 to 1.0 per cent after low segment operations, and 0 to 6 per cent after prior hysterectomies. We did not experience uterine dehiscence or rupture in this study but the "U-shaped" incision has not been extensively tried and documented and, therefore, the true incidence of uterine dehiscence or rupture is not known. Our results are too small to give any statistical significance. Follow-up of our patients might in future establish the "U-shaped" incision with a broad base as an alternative to the "J", the inverted "T", or the classical incisions if the transverse lower uterine incision cannot provide adequate room for the delivery of the fetal head.

This paper has 3 important messages: first, it is essential to dislodge the impacted fetal head upwards; secondly, the surgeon should feel a greater part of the head before incising the uterus to prevent air being sucked into the uterus and making delivery more difficult. Thirdly, the "U-shaped" incision should be properly planned to get more room in the uterus before delivering the fetal head. These three measures safeguard the inadvertent extension of the uterine incision into the broad ligament and uterine vessels to prevent maternal morbidity and mortality. We conclude that the U-shaped incision done at caesarean section by trained doctors to deliver the impacted fetal head or neglected shoulder is safe and should be adopted to prevent lateral extension into the uterine arteries.

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