Ruptured Uterus

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There were 40 cases of ruptured uterus in the Blantyre Mission Hospital during the years 1949 to 1957. Women with abnormal labours were admitted to hospital from an area of roughly 25 miles radius—about 2,000 square miles—which was inadequately served by only 10 to 13 African auxiliary midwives. During those nine years there were 6,213 confinements in hospital and the district midwives delivered 17,793 women, i.e., 40 cases of ruptured uterus in 24,006 confinements, or 1 in 600.

But for seven years, 1949-55, there were only two to four cases a year, 19 in 16,997, or 1 in 894 confinements, whereas in 1956-57 there were 10 and 11 cases, 21 in 7,009, or 1 in 339 confinements. In De Lee's *Principles and Practice of Obstetrics* (1947) figures are quoted from Chicago Lying-in Hospital from 1931-45 of an incidence of 1 in 1,600, in Philadelphia over 10 years 1 in 3,029, and from Peiping, as reported by Whitacre and Fang, from 1934 to 1941, 1 in 95 obstetric patients. The apparent increase in Blantyre in 1956-57 was, I think, due not to more cases occurring in the district, but to the more readily available ambulance service to bring the women to hospital. This year (December, 1958) there have been 12 cases in Blantyre, one in the mission hospital before its closure in February, and 11 in the Queen Elizabeth Hospital. (I am grateful to the Medical Superintendent for this information and permission to quote it.) By no means all women are delivered by qualified midwives in or out of hospital, so the actual proportion of women suffering from rupture of the uterus is impossible to gauge. It is almost certain that not all women who rupture are brought to hospital.

Seasonal Incidence

Taking the 40 cases by months, there were three in January, one in March, five in April, two each in May, June and July, four in August, three in September, four in October, five in November and nine in December, i.e., 22 in the first nine months of the year and 18 in the last three.

	Percentage of 27 Cases of Ruptured Uterus	Percentage of Women Attending Antenatal Clinic
Primigravida	(1 woman) 3.7	22.7
Para 1	(4 women) 14.8	24.3
Para 2	(9 women) 33.3	17.5
Para 3	(3 women) 11.1	10.9
Para 4	(3 women) 11.1	8.04
Para 5	(3 women) 11.1	6.0
Para 6	(2 women) 7.4	4.0
Para 7		2.51
Para 8	(1 woman) 3.7	2.1
Para 9	(1 woman) 3.7	1.0
Para 10+		1.05
	99.9	100.00

Multiparity

Of the 30 cases of which I have notes (1949-56), the parity was not recorded in three; of the others, it was as under. The parity found in women attending antenatal clinic (1949-51) is printed alongside for comparison.

The most marked difference is among the primigravidae, of whom there was only one—an even smaller proportion than that quoted by De Lee, who gives 1 in 8. De Lee also states that the danger increases with the number of children, which is also the case in this series.

Presentations and Causes of Rupture

There were four transverse lies, two brow presentations and one compound presentation, the others apparently having been vertex presentations, though it is not always possible to

tell the original presentation once the foetus has been expelled into the abdomen. In four vertex cases the vagina was very contracted by scar tissue caused by a previous difficult labour. Nearly all the women admitted from the village confessed to having had Native "medicine"; the primigravida had had it three times in two days (vertex presentation). This "medicine" is a plant the root of which is burnt to ash, or its leaves are pounded, and is then given to the patient mixed with thin maize gruel. It seems to be a powerful oxytocic drug, which, combined with some degree of obstruction to delivery, hastens rupture of the uterus. Is it possible that the preponderance of cases in December is due to the increased strength of the drug with the coming of the rains? It may be, of course, that the giving of the "medicine" is only incidental to neglected obstructed labour, but the clinical impression is that most of these women have had repeated doses in cases where a major cause of obstruction is not obvious.

Types of Rupture

All the 30 cases had anterior ruptures, the site being in all but two cases at the junction of the upper and lower segments of the uterus. In both of them the vaginae were obstructed by scarring and the rupture ran across the centre of the lower segment (transversely) and also through the posterior wall of the bladder which had been distended with urine. On opening the abdomen no rupture was obvious, but on examination the child's head was found filling the bladder. The uterus was incised as for a lower segment section and the child extracted through that incision. No attempt was made to repair the huge fistula. The patients progressed amazingly well and were discharged after 17 days and six weeks respectively, with instructions to return for further treatment, but did not do so.

Two ruptures were incomplete, the muscle being torn, but the peritoneum was intact. In one the head had remained in the vagina visible at the outlet, but the woman's general condition and surgical crepitus in the abdomen gave the diagnosis. The patient died. The second was after a four-day labour with marked vaginal scarring and had pus already present in the abdomen even with the intact peritoneum. She also died.

One patient ruptured with a second twin. The first child had been stillborn in the village. The woman was admitted with an oedamatous cervix and was given sedatives and rested well. Contractions began again with slow progress and rupture occurred unexpectedly. Operation was performed at once and no cause of obstruction was found.

In most cases at operation the foetus and placenta are completely extruded from the uterus, which has contracted firmly behind them. In a few the foetus is only partly extruded. In one case the patient was admitted having ruptured in the village with the child in the abdomen, but the placenta having been expelled per vaginam in the village. In all but one case the membranes had ruptured with the uterine wall, the exception being a full-time child complete in the sac in the abdomen. This patient's rupture was an old one and adhesions were already forming between the omentum and the rupture. One wonders if this patient would have survived without operation and the foetus have become a lithopoedion.

Results

In two patients with transverse lies and prolapsed arms the babies were delivered per vaginam and the diagnosis made on reviewing the cases. One died after 21 days when she suddenly had a copious discharge of pus and collapsed, and the other one day after delivery with a profuse haemorrhage. Twenty-eight patients were treated by resuscitation for shock and suture after laparotomy. No hysterectomies were done.

Of the 30 patients, 13 (43 per cent.) died in hospital and 17 (57 per cent.) were discharged. The majority of those who died did so within 24 hours of admission (nine women), one died after two days, one after three days, one (mentioned above) after 21 days and one who had been admitted with tear of apparently over 12 hours' duration remained in poor condition and died after 22 days. No babies were alive. The patients who lived had stays in hospital of 16 days to 10 weeks (average 30 days), the most frequent cause of a long stay being sepsis. Unfortunately we do not know how long they remained alive, as only one returned to hospital.

To our knowledge only one patient became pregnant again—the one exception referred to above. She was a woman who was admitted late in the second stage of labour with a very distended lower uterine segment and a brow presentation, and ruptured during preparation for operation, which was done about one hour after admission. She recovered well and became pregnant again within six months. As I

was afraid the scar would not be sound. I did a lower segment section at eight months, but there was no sign of the old scar, and the patient, who was a multipara, was told she should be able to deliver the next child *per vaginam*.

On reviewing the cases it would seem that women who have been ruptured under six hours on admission have a good chance of survival, those of 6-12 hours have some hope, but those of over 12 hours very little, though there are exceptions to all these.

The relative frequency of this serious complication of labour emphasises the need for more trained district midwives who will work in the villages and be accepted by the village women. In the southern part of Nyasaland, where the people are of matrilineal tribes, older women are still required—unmarried girls not being acceptable as midwives in the villages—and in spite of a lower standard of education and consequent difficulty during training, these women do very good work and win the confidence of the women in their area, some having over 400 deliveries a year. One old lady who retired recently had conducted over 7,000 deliveries in 20 years. Many more are wanted if the women are all to have trained help within reasonable distance and the needless loss of life caused by preventable difficulties of labour avoided.

REFERENCE

De Lee, J. B. (1947). *Principles and Practice of Obstetrics*, Ninth Edit. W. B. Saunders & Co., Philadelphia and London.