

## Rupture of A Gravid Uterus From April 1989 to 1991

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### Abstract:

Rupture of the uterus was observed in 13 cases during and after labor in Babylon hospital for maternity and children (Gyn. ward 1) from April 1989 to April 1991.

The ages of the patients were between 28 and 45 years. Occupation were doctor, teacher and house wife. The patients were referred from midwives and other distinct hospital and three of them were already in our hospital.

All patients were treated by abdominal operations. Some of them by vaginal and abdominal route together with massive blood transfusion and antibiotics.

Seven fetuses were saved while six fetuses were already dead at the time of arrival to the hospital, of the 13 cases there was no maternal death.

### Rupture of a gravid uterus introduction

Rupture of the uterus, despite its infrequent occurrence, remains one of the most serious obstetrical

emergencies especially in underprivileged society.

Rupture of the pregnant uterus remains an important cause of maternal death.

The main reasons for maternal loss in cases of ruptured uterus in the developed countries is hemorrhage and in under-developed countries the causes are hemorrhage and sepsis.

### Varieties of ruptured uterus

- 1- Complete rupture (involving all coats) which implies a laceration that extends into the peritoneal cavity usually an upper segment rupture.
- 2-Incomplete that stops short of the peritoneum (usually lower segment rupture extend into the broad ligament).

Propose considering rupture of the uterus at three distinct periods

- 1- During pregnancy.
- 2- During an ordinary labour.
- 3- Following protracted or difficult labour.

### Ruptre of the uterus during pregnancy

Spontaneous rupture of the uterus is an extermely rare. Occurrence in primigrvida (4.Feimus *et al* .1953), in review of spontaneous ruptre occuring in an apparently normal uterus he found only twelve primigravidae in 121 cases recorded in the last hunder years. In multipar-ae, however, it is not uncommon as a result of the streching and giving way of a previous cesarean scar.

Spontaneous rupture of the uterus may occur in the early months of pregnancy due to ruptre of an ectopic gestation, corneal or angular pregnancy (5.Aleck W. Bounrne and J.M. Holemes)

Spontaneous ruptre in the second trimester may occur due to placenta percreta, two cases were reported by Dick (6.O.S.Dick. 1972). This is rare occurrence, only five cases have been repoted in the English literature, in most these cases there were fundal ruptre.

Accidents during pregnancy might lead to a ruptred uterus such as a fall, blow, ect. A small group of

cases occurred in which ruptre in pregnancy was due to maldevelopment or diverticulum in the uterus.

### Rupture of the uterus during ordinary labour

The conditions resposible for ruptre of the uterus in an ordinary labour, with the possible exception of uterine mal-development, are those which we have seen predispose ruptre in pregnancy. The commonest causes are high parity, acquired cervical stenosis, misuse of oxytotic drugs, endometriosis in the uterine wall or unrecognised bruising at lacerations (particularly of the lower segment) at a previous labour all play an important part.

Rupture of the uterus in a primigravida was described by daw (7.E.Daw. 1973).

This was apparently caused by an infusion of oxytocin and was maked for over 24 hour by epidural analgesia.

The assocition between previous dilatation and curettage and subsequent ruptre in labour is well recognised (8. Weingold *et al* ,1966).

## Rupture of The Uterus After Protracted Labour

Upward retraction of the fundus pulling upon the dispensable lower segment in an effort to expel fetus past an insuperable obstruction may cause rupture of the uterus.

This leads to excessive stretching and thinning of the lower uterine segment, the site of the rupture is variable, but it is almost always in the lower uterine segment.

Commonly it is the front, but occasionally it is on the back. Where the uterus impinges the sacral promontory a rupture of both anterior and posterior walls has been recorded. Some tears arise in the side wall between layers of the broad ligament.

Others extend laterally into the broad ligament where they not infrequently turn upwards below the peritoneum.

A remarkable event was recorded by Crisp (9.Crisp *et al.* 1962). During a powerful uterine contractions the round ligament were avulsed from the uterus.

There is a further report of 41 instances of uterine rupture (10.S. Boudjemaa, T. Benzina Ben Cheik, A.C.Luieka, and others). The inci-

dence was 0.09%.

The resistance of the uterine wall decreases with increased parity. Aetiological factors include rupture of a caesarean scar, cephalo-pelvic disproportion, abnormal presentation, hydrocephalus, version and extraction and prolonged labour. There were four maternal deaths in the seven year study.

## Material and Methods

Rupture of the uterus was observed in 13 patients in Babylon hospital for maternity and children during the period of two years from April 1989 to April 1991.

The total number of deliveries in the hospital during this period was 20,330, total number of cesarean section was 2448. Number of section in ward 1 was 615.

Which give an incidence of rupture of 1:1548.

The aetiological factors were classified as spontaneous, traumatic and rupture of a previous scar.

There were 5 instances of spontaneous rupture, 4 of traumatic and 5 of previous scar.

The pregnancy was reached term and beyond in all patients.

## Pricipitataing Factors (In our study)

Total number 13	
- Cause of the rupter	Number
1- Hydrocephaly	2
2-Forecps	3
Attempt of forceps delivry on deep transvers arrest	1
Grand multiparous with dead fetus	1
Patient with pervious cesarean section	1
3-Curettage, after post partum haemorrhage	1
4-Syntocin drip	2
5-Rupture of previous scar	5

## Results

The results of our study are shown in these four tables

Stage of pregnancy	Number
1- 38 weeks	1
2-39 weeks	2
3- 40 weeks	3
4- term pregnancy	7

Type of Ruptre	Number
1- Anterior	2
2-Lateral	1
3-Anterior and lateral	4
4- Posterior and lateral	2
5- Ruptured scar	4

Treatment	Number
1- Repair	12
2-Hysterectomy	1

Baby	Number
-alive	7
-dead	6

All patients were treated by abdominal operations, three were treated by vaginal operations well together with massive blood transfusion and antibiotics.

Repair of the rent was performed in 12 cases and hysterectomy in 1 patient.

7 fetuses were saved while 6 fetuses were already dead at the time of arrival to the hospital, of the 13 cases there was no maternal death.

## Discussion

Rupture of the uterus was observed in 81 patients in an Egyptian hospital during the period 1955 to 1962, the total number deliveries in the hospital during this period was 31,116, which gives an incidence of rupture of 1:384 or 0.26%, the aetiological factors were spontaneous, traumatic or rupture of previous scar.

M. Brudenell and S. Chakravarti had reported the incidence of ruptured uterus at King's College Hospital in an eighteenth period in 1973/74 as 1 in 1,166 (2.M. Brudenell and Chakravarti. 1973).

## Conclusion

Prevention is better than Treatment, so prevention of ruptured uterus is by:

1- Advice all patients for regular antenatal visits especially high risk group.

2- Good education of midwives.

3- Careful selection of patients for hospital and home confinement.

4- Early detection of any complication for mother or fetus.

5- Urgent transfer of patient to a highly specialized unit.

6- Careful follow up and regular checking of all patients in the labour room.

7- Proper timing for surgical interference.

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## تمزق الرحم

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### الخلاصة

عولجت جميع الحالات بواسطة العمليات الجراحية عن طريق البطن بعد خياطة التمزقات المهبلية وعنق الرحم في بعض الحالات .  
تم نقل الدم الى معظم الحالات وبكميات بين ١-١٠ قنينة. مع اعطاء المضادات الحياتية في اغلب الحالات.  
كانت النتائج جيدة ونسبة الشفاء ١٠٠٪ ولم تحصل اي حالة وفاة بين الامهات. وتم انقاذ ٧ اطفال بينما كان هنالك ٦ اطفال متوفين داخل الرحم عند وصول الام الى المستشفى.

تم دراسة ١٣ حالة تمزق الرحم اثناء وما بعد الولادة في مستشفى بابل للولادة والاطفال الوحدة النسائية الاولى من قبل الباحثة خلال الفترة نيسان ١٩٨٩-نيسان ١٩٩١.  
كانت اعمار المريضات تتراوح بين ٢٨-٤٥ سنة وذوات مهن مختلفة (طبيبة-معلمة-ربة بيت)، هناك عشرة مريضات محالات من القابلات الاهليات والمستشفيات في المراكز الصحية في الاقضية، النواحي وثلاثة ادخلن الى المستشفى قبل الحدث .