COMPLETE RUPTURE OF GRAVID UTERUS:

A report of 18 cases

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Summary: The Authors report and discuss the treatment of 18 cases of complete rupture of gravid uterus, treated by them over a six months period in the Asella Regional Hospital, Ethiopia.

INTRODUCTION

The Asella regional Hospital, in which this study was done is situated in the Arssi Region, in the central area of Ethiopia, in this Hospital there are two italian surgeons depending from the italian Department to Cooperation and Development, of the Ministry of Foreign Affairs.

The region of Arssi is one of the most fertile of Ethiopia, the population is of about 1.177.000 people, the only hospital with operating theatres, and specialized surgeons, is the one in Asella, for this reason nearly the all amount of surgical emergencies are refered to this centre.

Arssi has a surface of about 23,000 sq kilometers, with a density of 50 inhabitants per sq/km, while for Ethiopia is of 25 per sq/km, the birth rate is of 44.7 per 100 people, with a natural increase of 24.9 per a thousand people per year ([1]).

In the six months period from 1-10-85 to 31-3-86, 18 cases of rupture of gravid uterus where treated all referred from the Health Centers and clinics of the region.

Generalities

As stated by Benson ([2]), the rupture of gravid uterus is an Obstetrics Cathastrophy, and a major cause of maternal deaths. The incidence of such event is of 1 every 1500 deliveries, taking in account both complete and incomplete ruptures, in our series all the ruptures considered are complete.

Pathology

There are two types of rupture of the uterus:

Complete rupture
Partial or incomplete rupture

Incomplete is when the lesion does not involve the whole thickness of the organ, complete when the full thickness of the wall is involved.

Ethiology

The ruptures of the uterus can also be classified as:

Traumatic, when the rupture happens in a healthy uterus;

Spontaneous when it happens in a uterus already affected by pathology, e.g. a fibroma, or the scar of a previous Caesarean Section ([3]).

Complete traumatic ruptures

They mainly happen as a complication of a wrong indication to the use of Oxytocin, ergometrine, or prastaglandins ([4]).

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Another frequent cause is an attempt to breech extracion through an incomplete dilated cervix, other causes are:

1) internal version;
2) the use of forcep;
3) the removal of a dead foetus;
4) the use of an exessive force over the fundus of the uterus;
5) strong efforts of the mother during delivery;
6) obstructed or negletted delivery, that in Europe is very rare, while in our series is the most frequent cause.

Spantaneous complete ruptures

This ruptures happen on pathologic uterus, these are predisposing factors to spontaneous rupture:

1) a previous Caesarean section;
2) a myomectomy;
3) a previuos curettage;
4) manual removal of the placenta;
5) multiparity, that can cause a weakening of the uterine wall.

CASES REPORT

During the six months period from 1.10.85 to 31.3.86 we treated 18 complete ruptures of gravid uterus.

All the patients were referred from the health centers of the region none happened in our hospital.

The mean age of the patients is 25 years, ranging from 18 to 32 years.

The mean number of pregnancies per patient is of 6.8, ranging from 1 to 12 pregnancies per patient, that in other words means that all the patients exept one were multiparous.

All the patients presented in shock, with an interval from the beginning, of contractions, to the admission to the hospital of about 24 hours, in no cases a Caesarean section was done previously.

Treatment

A total hysterectomy was done in 16 patients, 92% of cases, in all these cases 3 to 4 Nelaton drainage tubes were left, and a peritoneal lavage using Ringer's solution was done in all patients for the first 12 hours.

The simple repair of the laceration was performed in only two patients 8% of cases.

The subtotal hysterectomy has never been used.

RESULTS

There was a 22% mortality, that means 4 out of 18 patients died.

Of the two cases in which a simple repair of the laceration, one was re-operated in the seventh post operative day, because of saepticaemia, at laparotomy the uterus was necrotic and there was an absess in the Douglas pouch.

The patient was discharged in good condition 20 days after the second operation.

The other had a cardiac arrest during the operation, that resulted in brain damage, she died on the 12th post operative day of a bilateral pneumonia.

In the patients in which a total hysterectomy was done there was a mortality of 16%, three of these patients died, two during the operation, following a cardiac arrest, in both cases there was no response to pre-operative resuscitation.

The third patient died 12 hours post op. of saepticaemia, in this case the delivery started more than 72 hours before the admission to the hospital.

Associated lesions

In three patients, representing the 16% of the cases, there was a rupture of the bladder in association to the uterine rupture, in these cases the bladder was repaired, after debridement of the edges with a two layers chromic catgut continuous suture, in one of these patients a re-implantation of the left ureter was done since its orifice was involved by the laceration.

None of these patients died, the urinary catheter was kept for 12 days. Before removing it we have always checked a cystogram, that was negative in all cases.

Morbidity

During the post operative period the 27% of patients had a pneumonia, in one of these patients this was the cause of the death.

A wound infection was found in 4 cases, 22%, there were no dehiscences.

Bed sores affected 1 patient, 5%.

CONCLUSIONS

In the cases the totality of the ruptures was the consequence of an obstructed or negletted delivery, none of the patients had a praevious Caesarean section of an operation on the uterus, all but one were multiparous, the average deliveries per patient was 6,8.

All the patients have been referred to our hospital from the Health centers where there are no specialized nurses.

The mortality of 22% is low, datas from literature report a maternal mortality ranging from 10 to 40%.

In all our cases the foetus was dead at the moment of admission, there was no foetal heart beat, checked with Doppler.

In our experience total hysterectomy is the treatment of choice, once opened the abdomen we use to isolate the uterine arteries and tie them off, this control well and quickly the bleeding, and this is the first stage of the operation that we recomend in all cases, than we procede with the total hysterectomy.

The post operative peritoneal lavage, with Ringer's solution, via 3 or 4 Nelaton catheters inserted at operation, continued for 12-24 hours post operatively, and the use of large spectrum antibiotics seem to give very good results.

The simple repair of the laceration, or the subtotal hysterectomy, are not advisable, since a foreign body, septic in all cases, is left behind, in the abdominal cavity, increasing the mortality and morbidity, and performing a total hysterectomy takes only 15 minutes longer than a subtotal.

Of course after all these considerations, the best way of reducing this kind of pathology, will be the teaching to all the nurses working in the clinics and health centers of the Arssi region, the basic rules of assistance to the partum, and in reducing the delay from when an abnormality in the delivery is recognized or suspected, to the arrival to the hospital.

The reduction of this pathology will also be a good indication of the progress in the primary health care of the country.

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