HAEMATOMA OF RECTUS ABDOMINIS MUSCLE IN PREGNANCY

(Review of litrature and a case report)

by

P. TIWARI,* Ph.D., M.S.

and

D. W. BRIGGS,** F.R.C.O.G.

Haematoma from rupture of the rectus abdominis tends to occur in the stretched and thinned out muscle following repeated pregnancies, and occurs below the linea semilunaris. It is one of the causes of acute abdomen in pregnancy. It may either be torn completely or posteriorly behind an apparently intact muscle. Possibly because of the lack of contractibility in any stretched muscle, haemorrhage appears greater when this accident occurs in pregnancy than in the non-pregnant state. A haematoma in the lower half of the muscle is more apt to cause peritoneal irritation because of the absence of a posterial muscle sheath.

Rupture is also more likely to occur in the later half of pregnancy when it is usually preceded by illness associated with coughing, the common time being during and just after labour. When there is no history of cough or illness it is suggested that the term "Spontaneous rupture" should be used. Among the cases reviewed by Torpin, 15 cases were more than 28 weeks' pregnant, 8 between 20 to 24 weeks', one postmature and in the remaining 4 the gestation period was not known.

*Lecturer, Dept. of Obstetrics & Gynaecology, Institute of Medical Sciences, B.H.U., Varanasi.

**Consultant Obstetrician & Gynaecologist, Darlington Memorial Hospital, Darlington, U.K.

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Minor ruptures in muscle are common during labour but a severe rupture simulating an acute intraperitoneal condition is rare. Culbertson (1924) described 2 cases, Cullen and Brodel (1937) 2, Thomas (1943) 1. Torpin (1943) reviewed 28 cases from the literature including one of his own. Fahmy reported (1944) 2 cases, Dawson (1944) one. Teske (1946) reported one and analysed 100 from the literature. Aired (1949) collected 150 cases from the previous literature, another one was added to the list by Sheehan (1951) to increase the total to 151 to the end of that year. No further case reports could be traced in the literature to date.

Rectus abdominis rupture is a painful lesion being limited in its spread by the rectus sheath. Fatal cases of intraperitoneal haemorrhage and haematoma extending from costal margin to pubis have been reported. The pain and tenderness are superficial in location and are aggravated by muscle activity. A small haematoma usually subsides spontaneously in a few days, but the larger more painful swellings must be explored, with evacuation of the blood clots and muscle suture, bleeding points being rare. It is unusual for a correct diagnosis to be made before laparotomy reveals the true condition upon entering the rectus sheath.

This type of haemorrhage may simulate the abdominal signs of abruptio placentae

but there is no vaginal bleeding, the foetal heart is not affected, evidences of pre-eclamptic toxaemia are absent and the uterus is of normal consistency.

CASE NOTE

Mrs. S.P., 28 years sixth gravida, was admitted on 12-12-72 at 8.34 a.m. to Greenbank Maternity Hospital with the following complaints:

(1) Acute pain in the right iliac fossa for six hours, (2) Vaginal show of blood and (3) Amenorrhoea of 40 weeks.

Menstrual History: Menarche—13 years of age, Previous Cycles—7/28. Last menstrual period 27-2-72; expected date of confinement 5-12-72.

Obstetric History: Sixth gravida, 3 F.T.N.D. and 2 abortions.

Family History, Personal History and Past Medical History: Nothing significant.

She was a regular booked antenatal case, her first visit was on the 8-8-72 when the findings were: General condition satisfactory—weight 10 st. 10 lbs. Blood pressure—120/80 mm Hg. Urine—nothing abnormal. Oedema—Nil.

Haemoglobin—82 per cent. Cardio-vascular and respiratory system—normal. Abdominal examination—the uterus was 14 weeks' in size. From then on she visited Antenatal Clinic regularly except on two occasions and she had no abnormal signs or symptoms till this time.

Condition on Admission: 12-12-72

General appearance, pale looking. Pulse—90 per minute. Blood pressuse—116/70 mm Hg. Oedema—Nil. Urine—nothing abnormal. Haemoglobin—70 per cent.

Abdominal Examination:

There was no visible swelling, abdominal contour appeared to be normal. There was marked tenderness over the right iliac fossa.

Fundal height—term size, longitudinal lie, L.O.A. position of the foetus. The foetal heart sounds were 140 per minute with regular rhythm and tone.

Vaginal Examination:

Was not performed. A little amount of blood was present on the vulval pad.

Diagnosis:

A provisional diagnosis of either abruptio placenta or red degeneration were considered.

She was kept on conservative therapy and blood was cross matched and kept ready for transfusion. The patient went into spontaneous labour and progress was normal, until the developement of the progressive foetal distress, which required emergency caesarean section.

When opening the abdomen the cause of pain was revealed on incision of the rectus sheath. There was a big haematoma of the rectus sheath on the right side assessed at approximately 450 mls. of blood, which was evacuated, a few bleeding points being visualised and ligated. Lower segment caesarean section was performed in the usual manner and a live female child delivered. There was no abnormality in the foetus, cord or placenta. A drain was left in the abdominal wound and removed after twenty-four hours. Postcaesarean recovery was uncomplicated.

Discussion

The diagnosis of haematoma of rectus abdominis muscle was not considered in the present case. Out of 28 cases reviewed by Torpin only in 7 cases was the diagnosis of a rectus abdominis haematoma made, in 12 the diagnosis was revealed at the time of laparotomy, in the others the diagnosis was not verified by operation. This condition occurs mostly in multiparas, the case reported was a sixth gravida. In Torpin's review only 3 cases were primigravidas. In pregnancy it may be that over stretching of the muscle increases its susceptibility to trauma. In almost all cases in pregnancy there was some evidence of trauma from coughing—a fall or labour. The most likely precipitating factor would appear to be the limited elasticity of an artery or vein which prevents the vessel accommodating itself to movement brought on by coughing, sneezing, or the exertions of labour.

In most recorded cases the haematoma was limited to the rectus sheath, pain and tenderness being felt over the bleeding area. Muscle rigidity is often marked in the involved rectus, but in small haemorrhages there is little more than local tense-

ness. The swelling is usually confined to the affected muscle sheath though in some cases it extended to the broad ligament with rupture into the peritoneal cavity.

The similarity of the symptoms in many reported cases suggests that a typical case of ruptured rectus abdominis occurs in the last trimester of pregnancy and is characterised by multiparity, cough, acute abdominal pain, with pallor and shock depending upon the degree of haemorrhage. The uterus is usually normal in size for dates and foetal parts are easily felt; often a painful swelling to one side of the midline below the umblicus and signs of hyperaesthesia. The clinical syndrome is followed by the onset of labour a few hours later.

The lesion carries a very high maternal and foetal mortality. In Torpin's reviewed cases there was a 15 per cent maternal mortality and 50 per cent foetal mortality. Sheehan reported maternal mortality of 12 per cent and foetal mortality of 25 per cent. Most of this loss of life could have been prevented by a correct and earlier diagnosis. Although it is difficult to assess the exact cause of high foetal mortality in this condition the usual cause seems to be intrauterine anoxia due to maternal shock, in a foetus often premature. Maternal mortality can be explained by the late diagnosis of the case.

In the present case no obvious external swelling was seen, there was only local tenderness making the diagnosis obscure, the onset of labour suggesting the possibility of abruptio placentae. No steps for active treatment were taken as the general condition of the patient was satisfactory, the diagnosis coming to light only during caesarean section. It is possible that, but for the foetal distress the patient would have delivered spontaneously with natural absorption of the haematoma. Because of rarity and lack of clinical awareness, many of the less severe cases are never diagnosed or recorded.

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