

# RUPTURE OF THE SPLEEN COMPLICATING PREGNANCY

(Review of the literature and case report)\*

by

MOHINI MALIKA MEHLMANN, M.R.C.O.G.; RAJ BAVEJA, M.S.

GYAN WATI AGARWAL, M.B.B.S.

Rupture of the spleen during pregnancy is an uncommon condition and only 45 cases have been reported in the literature so far. The earliest report was in the American journal entitled "Laceration of spleen in pregnancy", by J. O. Whitney, M.D., in the Boston Medical and Surgical Journal Vol. II, 1869. With the advent of antibiotics, freer use of blood and improved surgical techniques, the high mortality associated with this complication has been considerably reduced.

Traumatic or spontaneous rupture can occur in a normal or a diseased spleen. The splenic pulp being soft and highly vascular, minimal trauma at times can result in intra-capsular rupture of the splenic pulp and formation of a haematoma. The capsule gives way when the haematoma has reached sufficient size resulting in intraperitoneal haemorrhage. As a result of this there is delay in the onset of symptoms following the trauma.

## Case Report

Mrs. S., aged 30 years, gravida 8, para 7, was admitted to the hospital with twenty

*From the Dept. of Obst. & Gynec., Moti Lal Nehru Medical College, Allahabad.*

*Received for publication on 16-3-68.*

six weeks pregnancy and pain in the upper abdomen following a direct blow by a lathi over the left side of the abdomen 5 days ago. The patient started severe epigastric pain on lifting a heavy vessel on the sixth day. There was no associated nausea, vomiting or vaginal bleeding, but the pain radiated towards the left side of the abdomen and back. The patient did not give any history of febrile episodes in the past.

On examination, the patient was restless and pale, sweating profusely, tongue was dry, pulse 130 per minute, blood pressure 74/50, temperature 98°F, heart and lungs were normal. Urine examination was normal. On abdominal examination, there was fullness in the region of the epigastrium and flanks, uterine height was of twenty-six weeks pregnancy, foetal parts were not discernable and the foetal heart was not audible. On vaginal examination the cervical os was closed and the cervix was not taken up. There was no blood on the examining finger. As soon as her blood pressure improved with blood transfusions, an exploratory laparotomy was performed with the presumptive diagnosis of intraperitoneal haemorrhage following rupture of the spleen. On opening, the abdomen was full of blood and the splenic capsule had ruptured. Splenectomy was done. The patient stood the operation well. She aborted within 48 hours without any complications. Her postoperative period was smooth and uneventful. The removed spleen was found to be normal.

## Discussion

The spleen is more liable to rupture when it has been affected by diseases

like malaria, typhoid fever, leukaemia, portal thrombosis, Banti's syndrome, infectious mononucleosis, septic infarcts, puerperal sepsis, relapsing fever, pneumonia, typhus fever and haemangioma.

A spleen having a short pedicle and a deep splenic sulcus is more prone to rupture. Sudden change in the position of the left diaphragm, for instance, by cough, sneeze, strain, blow or vigorous foetal movements, does at times result in rupture of the spleen in the region of the hilum. Byrne (1950) stated that the normal spleen never ruptures, but Zinkerman and Jacobi (1937) insisted that although non-traumatic rupture of the normal spleen occurs infrequently such a thing may happen. The present case had traumatic rupture of a normal spleen at twenty-six weeks gestation, and the interval between the original trauma and subjective symptoms was 6 days. She had characteristic signs of internal haemorrhage, epigastric pain and epigastric tenderness, but no shoulder pain.

McIndoe (1932) was the first to describe the interval between trauma and the onset of subjective symptoms. He reported intervals of 48 hours to 6 months. Rupture of the spleen during pregnancy can be both spontaneous or traumatic in a normal or diseased spleen. The gravid uterus and a raised diaphragm render the vascular spleen more susceptible to injury. Byrne (1950) emphasized the triad

of epigastric pain, epigastric tenderness, and pain in the left shoulder (Kehr's sign) as pathognomonic of rupture of the spleen.

#### *Summary*

A case of rupture of the spleen during the second trimester of pregnancy is presented, the cause being a direct blow over the abdomen. Traumatic or spontaneous rupture of normal or pathological spleen is usually met with late in gestation. A combination of large uterus, a deep splenic sulcus, and a short splenic pedicle is prone to rupture of the spleen with minimal trauma.

#### *Acknowledgement*

We are grateful to Dr. V. Samant, M.D., Prof. and Head of the Department of Obstetrics & Gynaecology, Moti Lal Nehru Medical College, Allahabad, for allowing us to publish the case.

#### *References*

1. Byrne, R. V.: Arch. Surg. 61: 273, 1950.
2. McIndoe, A. H.: Brit. J. Surg. 20: 249, 1932.
3. Whitney, J. O.: Quoted by Stevens, Clark, W. International Congress on Gynaecology & Obstetrics, Montreal, June 22/28, 1958. Modern Trends in Gynaecology and Obstetrics 1959.
4. Zinkerman, C. and Jacobi, M. Arch. Surg. 34: 917, 1937.