Necropsy was performed at 2.30 p.m. on March 9; the report was as follows: "The body was that of a fat woman of average build. Rigor mortis was absent. The peritoneal cavity contained about 4 oz. (114 ml.) of blood-stained fluid; there was no evidence of fat necrosis. Liver: size normal; rather fatty. Gall-bladder: size normal; contained six faceted pigment stones. Spleen: normal. Kidneys: both intensely congested and haemorrhagic. Suprarenals: congested. Pancreas: size normal; generally congested; the tail was very intensely haemorrhagic. Stomach: very congested; mucous membrane eroded and, in places, desquamated; no perforation. Bowel: congested only; no perforation. Bladder: normal; contained about 2 oz. (57 ml.) of turbid urine which, on examination, showed copious albumin, sugar, ketones, and blood—microscopically there were numerous erythrocytes and epithelial cells. Pleural cavities: normal. Lungs: normal. Pericardial sac: normal. Heart: somewhat flabby; otherwise normal." Samples of pancreas, kidney, liver, and suprarenals could not be examined histologically, as facilities did not exist.

COMMENTARY

This seems to be a clear case of poisoning by zinc sulphate. Treatment of the original collapse was successful, and progress was well maintained until the fifth day, when hyperglycaemic coma developed. Unfortunately the circumstances precluded daily examination of the urine, otherwise pancreatic insufficiency and renal damage might have been noted earlier. Nevertheless, twelve hours before the onset of coma no premonitory symptoms or clinical signs of hyperglycaemia were observed. It is regrettable that histological examination of the tissues mentioned could not be carried out, but in view of the gross pathological findings at necropsy I feel that this case should be regarded as one of haemorrhagic pancreatitis and widespread renal damage as a result of poisoning by zinc sulphate, with hyperglycaemic coma and death supervening on the fifth day.

My thanks are due to Major S. N. Mittra, I.A.M.C., who carried out the post-mortem examination.

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Post-partum Intra-abdominal Separation of Uterus

The following report of what must be a very rare condition may be of interest.

CASE HISTORY

On March 28, 1946, at 10 a.m., a primiparous European woman of medium build, 25 years of age, spontaneously gave birth to a male child of 8 lb. (3.6 kg.), after having been in labour for 8½ hours, a nurse only attending to her at home. No difficulties were experienced during this stage of the confinement; the placenta, however, appeared to be adherent, and all attempts by the nurse to expel it proved fruitless. It is stated that the patient had some diffuse haemorrhage, but no clots were passed. At 12.30 p.m. (2½ hours after being confined) the doctor was called, and he is alleged to have given her three injections: first 0.5 ml. ergometrine subcutaneously, then 10 ml. calcium gluconate intravenously, and half an hour afterwards a second 0.5 ml. ergometrine subcutaneously. The patient claimed that the doctor did not attempt to expel the placenta, nor did he examine her abdomen or make any other examination. Her condition continued to deteriorate, and she was admitted to the Germiston Hospital at 5 p.m. (seven hours after confinement). On admission she was in a state of collapse, with a feeble pulse and a blood pressure of 60/20 mm. Hg. She was very anaemic and somewhat restless, and there was a slight continuous ooze of bright red blood. The uterus was in a state of contraction. Pressure on the abdomen was resented. A blood transfusion of 1,000 ml. of whole blood was given, followed by 1,000 ml. of serum.

Operation.—At 11 p.m. the patient's condition was considered sufficiently improved to attempt a manual removal of the placenta, and the operation was performed by a house-surgeon, with the patient under a general anaesthetic. After having worked for twenty-five minutes he discovered omentum at the vulva. At this stage a further 1,000 ml. of whole blood was being transfused, although there was no excessive haemorrhage during this operation. I was then called into consultation, and was able to open the abdomen twenty minutes after the discovery of omentum in the introitus. To my surprise I found the uterus completely severed: not a tag connecting uterus and host remained. Apart from a fair amount of blood in the abdominal cavity, only three relatively

small bleeding points were found—one on either side in the round ligaments of the ovaries, and a third in the right uterine fold—which were clamped and ligatured. The uterine arteries could not be seen, nor was there any retroperitoneal haemorrhage. The stretched cervix was torn through and severed from the body of the uterus, with a fair-sized flap of peritoneum anteriorly. The broad bands with round ligaments of uterus and ovaries presented a continuous flap on either side; the Fallopian tubes, however, were torn off separately. Both ovaries were intact. There was no damage found on any of the adjoining viscera or ureters. With some reluctance it was decided not to look for the uterine arteries, as there was no sign of haemorrhage from them. The condition of the patient was somewhat precarious, and ligating these arteries would also have involved

Photograph of the uterus, showing the protruding umbilical cord and placenta, and the attached pieces of the uterine arteries.

ligating a major branch of the internal iliac artery. Very little trimming of the cervix stump was necessary. It was stitched, peritonealized, and the wound closed. The operation lasted about thirty minutes.

Her recovery was uneventful. She received penicillin (20,000 units three-hourly) and sulphadiazine (2 tablets four-hourly) with mist. pot. cit. for the first four post-operative days. During these four days she had to be catheterized, after which she passed urine spontaneously. On the third post-operative day her blood pressure was 130/80 mm. Hg, and her temperature, which showed a slight elevation (102° F.: 38.9° C.), settled to normal on the fourth day. She was discharged from hospital on the seventeenth day. On April 29 (one month after operation), when I last examined her, she enjoyed excellent health, and was apparently no worse for the loss of her uterus.

The specimen consisted of a contracted uterus with the placenta *in situ*, a few inches of umbilical cord and a bit of placenta protruding. On examination the placenta did not appear to be adherent. The circular tear went through the stretched cervix near the body of the uterus. Anteriorly the specimen was largely stripped from its peritoneum, while posteriorly the serosa was left intact. Both sides of the specimen showed tags of ligamentous tissue derived from the round ligaments of uterus and ovaries. Small ends of the Fallopian tubes were also left intact. Long pieces of the uterine arteries were attached to the specimen 3½ in. (8.9 cm.) on the right side and 2½ in. (7 cm.) on the left side, apparently torn off at their origins from the internal iliac arteries (see Fig.).

COMMENT

This patient made a definite statement that prior to 11 p.m. on the day of her confinement she had not had an anaesthetic, nor had she been examined per vaginam either by the nurse or by the doctor, yet there had been diffuse bleeding to account for her collapsed condition. The ergometrine injected at 12.30 p.m. and 1 p.m. respectively apparently accounted for the contracted state of the uterus. One may ask, Was there a uterine tear prior to the house-surgeon's operation, and, if so, how had it happened? Is it possible to cause a uterine tear by exercising abdominal pressure, or by Credé's method of expelling the placenta? Whatever the answer may be, the patient's survival after such a gross lesion must be without parallel.

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