

*Case XII.*—A Lance-Naik of the 32nd Pioneers was shot in the region of the left shoulder joint on the 26th May. The head of the humerus was shattered, but the vessels and nerves had escaped. His arm was strapped to his side with the hand on the opposite shoulder after the wound had been dressed. He complained of much pain, for which morphia was given, but otherwise seemed to be doing well. On the 28th May I was out the whole day on a military expedition, and on my return in the evening was astonished to hear that he had died suddenly that morning, and that his corpse had already been burnt. I am quite unable to speculate as to the cause of death.

*Case XIII.*—A man of the 8th Gurkhas, who was running through a number of rifles lying on the ground on the 26th May, tripped over one, which went off, and was thus accidentally shot by one of our own Lee-Metford bullets. The bullet took an extraordinary course. It went right through the muscles of the left calf, entered again at the inner part of the left thigh suspiciously near the femoral artery, emerged at the front of the left thigh in its upper third, entered again just below the spine of the left ilium, and after a track of 3 inches under the skin, finally emerged at the back of the left loin. The skin at this last part broke down, leaving a long shallow ulcer, which granulated. The other wounds healed quickly.

*Case XIV.*—A Havildar of the Bengal Sappers and Miners was sitting cooking his food in the Gyantse Post, with his back to a substantial protective traverse made of logs and stones. A large *jingal* bullet weighing 4lbs.—a "Big William" as it was generally known in Gyantse—passed through the traverse, grazed the inner side of his left forearm and adductor surface of his left thigh, and finally buried itself in the ground just between his legs. The skin showed extensive bruising, and finally a large area on the inside of the thigh sloughed, leaving a large shallow ulcer.

The above show in some degree the variety of cases we have been called on to treat. I may add a few words about a couple of cases of interest, which have since occurred, though not cases of wounds in action.

On the 2nd of August, a Sepoy of the 32nd Pioneers, was asleep in a tent on picquet duty with several others. He was awaked at about 2 A.M. by a comrade for his turn of sentry-go, and just as he was turning round, preparatory to rising, in some unaccountable manner a Lee-Enfield rifle lying on the ground about 8—10 inches from him went off. The bullet entered by a small hole in the back of the left carpus and emerged in the left forearm above the wrist. At the wound of exit was a long triangular clean cut tear of the skin, some 3 inches long. It seemed as if the bullet had simply burst out through the elastic skin, tearing it over this extensive area. The muscles or tendons were

not damaged. Another interesting point is that although the rifle was discharged at this short distance from the bare skin of the back of his hand, there was no sign of singeing or of particles of powder near the wound. It would have been impossible to say from an examination of the wound that the rifle had not been discharged at a distance of 100 yards.

Lastly, the case of a Tibetan interpreter with the Force, who went into Lhasa contrary to orders the other night, on a private enterprise from our camp here.

News was brought in next day that he was lying cut to pieces in a Tibetan house in the city. A doolie with an escort was sent for him and he was brought back to camp in the afternoon. He had been lying in a filthy Tibetan house for over 16 hours after he had been wounded, covered with dirty blankets, and with his wounds bound up with nondescript Tibetan rags.

He was found to have received no less than 10 sword cuts, most of them very severe, and must have lost pints of blood. Of two long scalp wounds, both grooving the skull deeply, one had divided the left temporal, which started spouting when the wounds were being cleaned and had to be tied, another cut went clean through the left radial, another opened the right wrist joint and so on. And yet now a week later, nearly all the wounds have healed by first intention, and he is walking about quite cheerful.

## A Mirror of Hospital Practice.

A CASE OF FULL DEVELOPMENT OF A FETUS IN THE ABDOMINAL CAVITY, ITS DEATH, SUBSEQUENT REMOVAL BY ABDOMINAL SECTION AND RECOVERY OF THE MOTHER.

COMMENTS ON THE CASE.

BY F. S. PECK,

LT.-COLONEL, I.M.S.

*Professor of Midwifery and Gynæcology, Calcutta University, Surgeon to the Eden Hospital for Women, Calcutta.*

MOKHADA, a Bengali Hindu, married, aged about twenty years, was admitted to the Eden Hospital, Calcutta, February 28th, 1902.

*Personal History* (obtained from her, her husband and uncle).—First menstruated at the age of twelve, periods regular, free, and lasting usually four days. Has been married nine years, and living with her husband during the last eight years. Up to the present has had no children nor miscarriages. Menses ceased in February 1901, the usual symptoms and signs of pregnancy following—morning nausea, salivation, breast changes, etc., with a gradual increase in the size of the abdomen. Quickening

was noticed about the fifth month, but she could feel no foetal movements after the end of the seventh month. Had an irregular, very scanty discharge of blood commencing about the third or fourth month and continuing during the course of the gestation. Never had any severe pain, attacks of faintness, nor sensation of internal "giving way;" never any severe hæmorrhage.

Since the cessation of menstruation she suffered from frequent attacks of fever which, about December 1901, became very severe and assumed the remittent type. She was confined to bed and was prostrated until the beginning of January 1902, when she had pains and a profuse discharge—"about six pounds"—of blood mixed with pus from the vagina. After this discharge her condition improved, the fever disappeared and she was able to walk about in a few days, but a thick, purulent, yellowish discharge continued from the vagina, and about a fortnight before admission a swelling began to appear at the umbilicus.

*Condition on Admission.*—Medium in build, thin and cachectic in appearance. Temperature 97° F. in the axilla. Milk could be expressed from the breasts. There was a tumour in the abdomen, central in situation and reaching about two inches above the umbilicus, which felt like the pregnant uterus at term but rather harder. There was also a tender fluctuating swelling about the size of a walnut at the umbilicus. No foetal parts nor movements could be felt, nor foetal heart sounds heard. There was an offensive discharge from the os uteri which was soft and patulous. Sound entered about three inches. Under chloroform the cervix was dilated, uterus explored and found empty.

*Operation.*—On the morning of March 2nd, an incision three inches long was made midway between the umbilicus and pubes. A quantity of thick and offensive pus came out from the upper part of the wound, the incision was then prolonged and the gestation sac opened. The back of the foetus was at once exposed, the head lying upwards in the left hypochondrium and the breech in the right iliac region, the legs were flexed on the body, which was curved upon itself; the whole being immersed in pus.

The foetus was removed after a ligature had been secured at the placental end of the cord. It was a fully grown male, slightly decomposed, measuring twenty inches in length and weighing five pounds, ten and a half ounces.

The placenta, battledore in shape, very thin and membranous, was firmly attached and spread out over the upper part of the sac, extending more to the right than the left. The cord was attached to its left side.

The sac was entirely shut off from the rest of the abdomen. Above and behind was the stomach and transverse colon, behind and to its right the ascending colon and liver, its anterior and lateral boundaries were formed by the

abdominal parietes. The floor was formed by two smooth rounded masses with the hypertrophied uterus, somewhat flattened at the top, in the centre. These lateral masses were composed of the small intestines pushed down and matted together in two separate bodies. No communication between the sac and uterus could be determined. The removal of the placenta was not attempted, as it was very thin and membranous; disturbing it would most certainly have been attended with severe and uncontrollable hæmorrhage. It was therefore left *in situ*, its further treatment to depend upon circumstances. The cavity was thoroughly irrigated with a solution of izal and packed with izal gauze sprinkled with iodoform. The wound, save for a couple of inches at the top to permit of the cavity being irrigated and the packing changed, was closed with interrupted silkworm gut sutures.

*Subsequent Progress.*—The patient after a highly satisfactory course made an excellent recovery. During the evening of the second day after the operation she had a slight rise of temperature, *i.e.*, 100 F. She required but a small quantity of stimulants. During the first fortnight the cavity was irrigated twice daily with izal solution and loosely packed with iodoform powdered gauze. The discharge, which was thick, yellowish and free during the first week, continued to be offensive for some time, and on two or three occasions a few shreds came away. The vaginal discharge stopped completely from the third day after operation. The swelling on the left side of the uterus rapidly subsided, and a fortnight after the operation there was no tumefaction nor tenderness over the part. The swelling on the right side of the uterus was, however, slow in subsiding. From the third week the cavity was irrigated with a weak iodine solution; the discharge quickly diminished, the swelling and tenderness subsided. About April 27th, the wound completely closed. Before allowing it to close entirely it was carefully probed, and no sinus could be determined, the abdominal cavity being completely filled in with its viscera. The liver returned to its normal position about a week after the operation. The patient quickly regained her strength and was walking about within two months. Before her discharge a thorough examination was made; there was no trace of thickening in the broad ligaments, the sound entered slightly more than the normal distance and could be felt above at the site of the abdominal wound. The sac appeared to have become adherent to the fundus and, in its contraction, to have drawn up the uterus in a sort of ventro-fixation.

*Remarks.*—The most notable points in the case are the following:—

1. Absence of any sign or symptom, in the history, which pointed to or suggested a rupture of a primary tubal pregnancy.

2. Very high, firm and complete attachment of the placenta, and its subsequent fate.

3. The uninterrupted development of the foetus, evidently up to full term.

1. The total absence of a history of early rupture leads one to believe it to be a case of so-called primary abdominal pregnancy, the possibility of which has been disputed. It is most difficult to believe that an intraperitoneal rupture could have occurred without producing any signs or symptoms whatever. This point was carefully investigated, but no history of anything simulating internal hæmorrhage or peritonitis could be elicited.

2. The very high attachment of the placenta indicates that the ovum either must have travelled or been propelled so far as to have been implanted on the stomach. It is highly improbable, if not entirely impossible, that an ovum some weeks old should have or could have travelled so high after rupture of a tubal pregnancy, the usual site of attachment in such cases being in the vicinity, more or less, of the tube. This fact also favors strongly the idea of a primary abdominal pregnancy. The subsequent fate of the placenta was somewhat obscure. It is evident that it was not expelled; probably part was disintegrated and discharged with the pus, the remainder may have been absorbed.

3. The size and weight of the foetus clearly shows that the pregnancy continued to full term. In cases of intra-peritoneal rupture of a tubal pregnancy the ovum usually dies. In the present case the foetus developed to full term in an intra-peritoneal sac, the sac walls being formed by the foetal membranes adherent to viscera and abdominal parieties.

This case is instructive as illustrating the infinite resources of nature:—

First in the exercise of the reproductive function. That a membrane like the peritoneum should be able to assume the functions of the uterus, to nourish and develop a child to full term, tempts one to believe that a fertilized ovum may be fully developed in whatever part of the human body it may become implanted.

Secondly the fact that the patient's abdomen did contain a decomposing foetus, intimately connected with her circulation and floating in several pints of the foulest pus, the whole undoubtedly teeming with pyogenic organisms, and that she should, at the time of and after operation, have shown no sign of septic infection, proves the extraordinary powers of self-protection possessed by the human system.

In considering the causation of general sepsis, it appears that this very power of defence is underestimated.

Writers, on puerperal sepsis in particular, lay great stress, and very rightly so, on the im-

portance of minimising the possibilities of infection. But they do not as a rule call sufficient attention to the fact that a healthy constitution will usually defeat an invasion of pyogenic organisms, while a patient exhausted by protracted labour or hæmorrhage, will succumb to the introduction of a comparatively small dose of poison.

As regards the causation of ectopic pregnancy the waters have been hopelessly muddled by the assertion that ova are normally fertilized in the ovaries and tubes. The explanation of tubal pregnancy then depends on an assumption of partial obstruction, such as would permit of the passage of spermatozoa, but would bar the descent of the fertilized ovum through the tubes. This is obviously far-fetched and does not explain the possible occurrence of primary abdominal and ovarian pregnancies, although the existence of such conditions is practically proved. There is no proof that spermatozoa, under normal conditions, effect an entrance into the tubes at all. The discovery of spermatozoa in the tubes and ovaries of recently killed animals proves nothing, as this invasion is quite likely to be *post mortem*.

Supposing it is assumed that—

1. The ovum is normally fertilized in the fundus uteri.

2. That where the ovum becomes fertilized, there it adheres.

3. That the normal movements of the Fallopian ciliæ propel the ova into the uterus, and also prevent the entrance of spermatozoa into the tubes. Then defective Fallopian ciliæ will account for the absence of ova in the uterine cavity and the usual preliminary period of sterility and also for the possibility of the entrance of spermatozoa into the tubes and consequent ectopic fertilization. Pregnancy will then occur at the particular stage of its journey at which the ovum meets the spermatozoon, in the tube, in the abdominal cavity, and even in the sanctuary of the ovary itself.

The theory of adhesion at the site of fertilization also has the merit of explaining another phenomenon, *viz.*, that of placenta previa. An ovum gravitates down to the neighbourhood of the cervix before it becomes fertilized. It there adheres to the endometrium, and the decidua serotina and placenta then develop.

The foregoing theory appears the simplest that has yet been put forward. There are no facts which disprove it, and it has the advantage of explaining the different phenomena of ectopic gestation and placenta previa, without assuming the necessity of pre-existing severe inflammatory conditions, and without straining the powers of imagination to a dangerous extent.

This theory has already been broached by Mr. Bland Sutton and the late Mr. Lawson Tait.