Puerperal Pelvic Thrombosis: Exploratory Laparotomy: Ligature of Left Common Iliac Vein.

By Arthur J. Wallace,

Surgeon, Hospital for Women, Liverpool.

The patient was aged 25, and had had two children, the last three weeks prior to admission to the Hospital for Women. Shortly after the second labour there had been an attack of chest trouble diagnosed as bronchial pneumonia of limited extent, from which the patient rapidly recovered. This was probably embolic in origin. On the sixth day after parturition the patient had a rigor with hyperpyrexia, and rigors recurred every two to three days up to the time of admission. The diagnosis presented no difficulty, for in addition to the general constitutional symptoms thrombosed veins were palpable along the line taken by the left uterine veins and also along the line of the left obturator vein. The palpable pelvic portion of the left ureter appeared normal.

The patient looked extremely ill; she was very anæmic and emaciated, and her weakness increased after each rigor. These rigors had been increasing in number, duration and intensity prior to admission to Hospital on August 15. Immediately after admission a rigor occurred, the temperature reaching 106°F., and the pulse 160. A second occurred during the night, two on the following day (Aug. 16), and when (on Aug. 17) the patient was brought into the theatre for operation her temperature was 105°, and the pulse was 148. The anæsthetic possibly arrested the rigor that was impending or it and the operation with the inevitable loss of blood may have aborted it. Operation was decided upon because the rapidly recurring rigors were so exhausting the patient that the fatal ending was a matter of hours. I felt that, even if excision of the septic focus were not possible, a chance might be given by preventing, even if only temporarily, the outflow of toxins and emboli from it. This chance I resolved to give by a rapid exploration of the pelvic condition by means of a laparotomy.

On August 17 the abdomen was opened. The upper portion of the left broad ligament was thin, and standing out prominently under its anterior peritoneal layer was a tortuous vein $\frac{1}{8}''$ in diameter, which on palpation was found to be thrombosed as far out as the beginning of the left infundibulo-pelvic ligament. This ligament was doubly ligatured and divided as nothing beyond induration could be felt in the deep parametric tissues. No clot occupied the vein at the site of ligature. The division was extended through the peritoneum anteriorly and posteriorly, so as to expose a considerable extent of the cellular space. Investigation showed that the left

internal iliac vein was thrombosed as far as its junction with the external iliac vein. The anterior branch of the internal iliac was also thrombosed and the indurated cord could be traced forwards and inwards towards the uterus. The posterior branch of the internal iliac vein could not be recognized by touch. A line of induration could be traced along the direction of the left obturator vessels. All these thrombosed vessels were surrounded by a tissue that was extremely moist and which would not yield to blunt dissection as cellular tissues usually do. Therefore it was decided not to risk the dangers implied in removal of the principal thrombosed veins. Instead, as the vena cava and left common iliac veins were not thrombosed, ligature of the left common vein appeared to be the safest proceeding. This vein was exposed after some little trouble in disinterring it from a bed of moist dense tissue similar to that found in the pelvis. A ligature was applied and firmly tied.

During the dissection to expose the common iliac vein a large vein was encountered in the situation of the middle sacral. The point of interest lies in the large size of the vessel, due probably to the blocking of the anterior branch of the internal iliac vein, the middle sacral taking a large part of the duty usually performed by the former. The abdomen was closed without drainage.

On the day following the operation the patient looked better, and said that she felt better, but the temperature, after a drop to 99°F., rose irregularly but steadily to 104°F., the pulse remaining about 130. No more rigors occurred until the fourth day after operation, and during these days the general condition improved steadily, but the first rigor was but the precursor of numerous others, and the patient ultimately died of sheer exhaustion produced by them.

The case is recorded for two principal reasons—(1) to show the difficulty, if not the impossibility, of dissecting out thrombosed veins in well-marked puerperal thrombosis; (2) it is an illustration of the futility of closing up one set of exits from the thrombosed area.

For a few days no doubt toxins and minute emboli were locked up in the danger area. But as soon as ever collateral venous channels became opened up both toxins and emboli found their way into the general circulation with fatal consequences. It is doubtful whether even ligature of the inferior vena cava would have sufficed in such a case as this, for the probability is that the toxic materials would still have continued to travel along whatever venous collaterals happened to become opened up.

I cannot but admit that the relief from rigors during the three or four days following the operation was an immense boon to the patient. She herself realized this, and told me it was well worth the distress incidental to the laparotomy which was but a palliative measure that for a short time postponed the fatal ending.