atrophy of the musculature. Ligation of the tube will not necessarily result in atresia and sterility. Any reliable operation on the tube depends upon resection and careful occlusion of the free ends between the leaves of the broad ligament. Resection alone is sufficient in operations such as uterine interposition. This is probably due to the pull on the ampullar end of the tube, which keeps the cut ends separated. The writer has seen no case of pregnancy in 100 cases of interposition operations in which the tubes were treated in this way.

H. M. LITTLE.

Van de Velde: The Question of Sterilization. *Nederlandsch Tijdschrift voor Geneeskunde*, 1921, lxx, 2920.

The cause for which a sterilization operation is performed being frequently of a temporary nature, it is desirable to have at our disposal a method for temporary sterilization. With this end in view, attention has been directed mainly at the tubes, however, it seems the less we disturb the tubes, the better. Upon this conclusion, efforts have been made to bury the ovaries in such a way that they may again functionate upon being liberated. It has been found, however, that when buried in the broad ligament, the ovary becomes so covered by connective tissue as to prevent the discharge of ova after liberation of the organ. The Alexander-Adams operation, in which the ovary is buried outside the inguinal ring, has the disadvantage that the organ so placed is subject to trauma and often becomes painful.

Van de Velde attempts to overcome these disadvantages by burying the ovaries in the vesicouterine pouch. The ovary is partly mobilized by making a small incision in the fimbria and ovarian ligaments. This is carefully enlarged without injuring any of the blood vessels. Bleeding must be carefully controlled, the blood supply not disturbed and the organs handled very gently. Taking the ovary and tube between thumb and fingers, a slit is made through both layers of the broad ligament just below the ovary and the latter pushed through this opening. The edges of the broad ligament are sewed to the mesovarium with interrupted silk sutures, care being taken to avoid leaks and not to interfere with the blood supply. The vesicouterine pouch is then obliterated by sewing abdominal to visceral peritoneum, making use of the round ligaments.

The author has performed this operation nine times and in one case had occasion to liberate the ovaries after a number of years with the result that the patient soon afterwards conceived and, in due time, gave birth to a living child. Later on she was delivered of another healthy child.

R. E. WOBUS.

Flatau: Sterilization by Knotting the Tubes. *Zentralblatt fuer Gynaekologie*, 1921, xlv, 467.

The author notes that Nuernberg had collected 36 methods of sterilization prior to 1917, and believes that probably half a dozen others have been described since that date. About 6.5 per cent of all cases operated on are unsuccessful, and, though this is probably a low figure, it is evident that no one operation is simple and successful. Division, incision, extirpation of the tube or its ligation with catgut or silk, have all been tried, also the compression of the tube with forceps or

with the angiotribe. Flatau himself in five cases, where there had been extreme compression for five minutes, with resultant tissue-paper-like appearance of the tubes, was absolutely unsuccessful. All became pregnant later. For this reason he began to try knotting the tube. The technic is extremely simple. The tube is freed from the upper margin of the broad ligament and a true knot is made about its middle, and the incision in the broad ligament is closed by a continuous cat-gut suture. This has been done in six cases. The results are so far uncertain, but the operation is suggested as simple and worth a trial.

H. M. LITTLE.

Madlener: Answer to Flatau's Paper on Sterilization. Zentralblatt fuer Gynaekologie, 1921, xlv, 825.

Madlener objects to Flatau's claim that Madlener's procedure is unsatisfactory and unreliable. It consists in the crushing of the middle portion of each tube by means of a heavy forceps and placing a ligature of non-absorbable material into the pressure groove. The writer insists that his method has proved useful in his own hands.

H. M. LITTLE.

Hellendall: A New Method for Tubal Sterilization. Zentralblatt fuer Gynaekologie, 1921, xlv, 822.

There is no safe procedure of artificial sterilization available which would permit restoration of normal tubal or ovarian function if at a later date this seems desirable. Sellheim planted the fimbriated ends of the tubes extraperitoneally by drawing them into the inguinal canal. Gutbrod in a similar manner changed the position of the ovaries. But all these operations failed in certain cases to actually sterilize the patients. Pregnancies have occurred. Nuernberger pulled the fimbriated ends of the tubes into the vagina through an incision into the posterior culdesac. This leads to various disturbances. Hellendall modified this latter procedure by fixing the tubes into the abdominal incision at the occasion of a ventrofixation.

H. M. LITTLE.

Hellendall: Pregnancy after Ligation of Both Tubes. Medizinische Klinik, 1921, xvii, 1116.

A forty-three-year-old woman was operated upon for inflammation of the ovary, and during the course of the operation both tubes were ligated and cut to effect sterilization. Three years later, she returned with the history of having menstruated regularly every three weeks for six days until recently, when she had been bleeding steadily for four weeks. On examination the uterus was found to be soft, the cervix closed and the uterine cavity 10 cm. long. There was slight bleeding at the time. During curettage a small piece of tissue, the size of a bean, was removed. The Pathological Institute returned a diagnosis of placental tissue.

E. D. PLASS.