A TECHNIQUE OF VAGINAL RECONSTRUCTION

(The Formation of an Artificial Vagina from Peritoneum of the Pouch of Douglas)

By

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SUMMARY

A technique of formation of the vagina (Colpopoiesis) from the peritoneum of the pouch of Douglas has been presented. The operation is simple, takes approximately 40 minutes, and the late results are satisfactory. The technique has been successfully used by others in the past.

In 18 years old married female presented with absent vagina and well developed secondary sexual organs. She had difficulty and pain during coitus. There were no other abnormalities in genitourinary tract. The investigations for sex chromation revealed female genotype. The laparoscopy was performed at the time of the operation to avoid repetition of anaesthesia and take advantage of the pneumoperitoneum in perineal dissection of the pouch of Douglas.

Technique

The operation was done under general anaesthesia with endotracheal intubation and intermitent positive pressure respiration.

The laparoscopy was performed to visualise the pelvic organs as usual. It reveal rudimentary uterus with well developed overies. After withdrawal of laparoscope, pneumoperitoneum was not deflated and about 1500 cc. of gas is allowed to remain in the abdomen.

The patient was placed in lithotomy position and an incision was made through the vestibule between urethra and anus. The space between urethra and bladder anteriorly and rectum posteriorly was the dissected until the under surface of the peritoneum of the pouch of Douglas visualised. The pouch of Douglas protruded like sausage shaped swelling due to the presence of pneumoperitoneum. The peritoneum was then separated from the rectum posteriorly and laterally without opening it. This dissection was also facilitated by the ballooning of the peritoneum. This is a very essential step of the operation because mobilisation of the peritoneum from all sides will help bringing the edges of the peritoneum down to the vestibule during following stages of the operation.

The perfect haemostasis was achieved in the space dissected between bladder and rectum. The perfect haemostasis ensures better take of the peritoneal graft.

The peritoneum was then punctured by a needle deflating the pneumoperitoneum

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and incised transversely. The edges of the peritoneum were pulled down upto the wound edges of the vestibule. The previous dissection and mobilisation of the peritoneum especially lateralwards helps in pulling down the peritoneum and its suturing without tension all around the circumference of the vestibule. In this way a canal lines by peritoneum and running from vestibule to the peritoneal cavity is formed. In the depth of the canal we may see omentum, intestines, ovaries etc.

Next step is to form vault of the vagina and close the abdominal cavity. The rudimentary uterus is then pulled down and sutured to the rectal peritoneum with catgut sutures. In addition buttressing sutures are taken at the vault of the newly formed vagina (Fig. 1).

A self retaining catheter was put in the bladder and vagina is packed tightly with a soframycin soaked gauze roller pack.

During postoperative period, pack was removed on 5th post operative day. Thereafter the pack was changed every day. After first four days the serous surface of the peritoneum appeared bright red and bleeds on touch. Later on it gradually acquires usual pink colour of the vagina and its usual feel.

From 7th postoperative day the patient was trained in the use of sponge mould specially prepared by wrapping the sponge round a ordinary catheter and covered by two condoms. This sponge exerts uniform pressure to keep the cavity patent and does not cause pressure necrosis.

The patient was discharged on 10th post operative day. On discharge vagina was capacious and was asked to use sponge moulds supplied from the hospital. Regular coitus was advised after 3 months.

On follow-up late result upto 6 months is satisfactory. There are no complaints such as dysparunia, dryness of vagina etc. There is usual sexual activity, excitement and satisfaction. The vagina on examination was 3-4 cms wide and 10-12 cms deep. The appearance and feel is, like normal vagina except slight pulling of labia minora in the vagina. The junction between peritoneum and the vestibule can be identified as whitish line.

Comments

On review of the world literature the first mention of the transposition of the pelvic peritoneum and suturing the transposed peritoneum to the vestibule for colpopoiesis was by Tula surgeon M. I. Ksido in 1933. In subsequent years Glowinsky (1937) and Jennen (1957) carried out similar operations for women with absent vagina with considerable success. They found the technique easy and results satisfactory. The large series of 46 similar operations but in 3 stages, by abdomino-perineal route was reported by Davydov (1972) from Leningrad postgraduate Medical School, Leningrad (USSR).

In his series of 46 cases thus operated so far there were no complications and the end results (6 month to 3.5 years) were satisfactory.

We have attempted the operation through the perineal route as one stage operation, bringing down the peritoneum of the pouch of Douglas and closure of the abdomen by perineal route only. The pneumoperitoneum created during laparoscopy helped in the identification and dissection of the peritoneum.

In the patient thus operated the operation time was 40 minues. There were no

postoperative complications. The hospital stay was 10 days. The late postoperative result was satisfactory with vagina 3-4 cms wide and 10-12 cms deep. She is leading normal sex life.

Thus the idea of using peritoneum of the pouch of Douglas for creation of artifical vagina opens up a new approach for the treatment of vaginal agenesis.

In senior author's opinion who has considerable experience in Coloplasty (Shirodkar) and MacIndoes' operation, this operation is simple, its not a major operation requiring surgical expertise as in Coloplasty, and does not require a skin graft which may give a tender keloidal scar on the thigh as in MacIndoe's operation.

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