

# SPONTANEOUS CLOSURE OF VESICO-VAGINAL FISTULAE

(Following Operative Trauma)

(Report of Two Cases)

by

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Spontaneous closure of urinary fistulae following difficult childbirth is known for ages. Operative trauma when adequately repaired immediately, prevents formation of fistulae in a large number of cases. Undetected operative trauma contributes towards development of urinary fistulae following many gynaecological operations. The following case reports indicate the possibility of spontaneous closure of such cases with specific principles of treatment. The first case had vesico-vaginal fistula following total abdominal hysterectomy with bilateral salpingo-oophorectomy and the other following decapitation and repair of ruptured uterus.

## Case 1

Mrs. S. P., aged 41 years, had menorrhagia for four months. Her previous menstrual history was normal. She had 7 F.T.N.D. She underwent sterilization

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following last full-term normal labour. She was investigated and treated conservatively for some time. It was considered likely, following investigations, to be a case of adenomyosis and pelvic endometriosis.

On 3-7-'65, she was admitted for hysterectomy. The systemic examination, and routine pre-operative investigations were within normal limits.

On 5-7-'65, a total abdominal hysterectomy with bilateral salpingo-oophorectomy was done. The steps of the operation were standard with the following unusual findings. The left appendages were adherent to the pelvic colon; these were separated and raw colonic area reperitonised. The utero-vesical pouch was shallower than usual. The urinary bladder was adherent towards the right Mackenrodt's ligament. The other bladder relations could be easily identified and dissected. Total abdominal hysterectomy was then completed. Soon after the operation, the urine was blood-stained; so, a self-retaining catheter was kept in.

The post-operative course, except for blood-stained urine, was satisfactory. The urine was straw-coloured on the 6th post-operative day with adequate output. On the 7th day, she had 100°F temperature. The sutures were removed on the same day. The wound had healed well.

The indwelling catheter was removed and patient was passing urine. On the 8th day, she complained of pain over the operated area and bed wetting. A superficial abdominal wall abscess was detected and hence it was adequately drained. The pus and urine were sent for bacteriological study.

Speculum examination revealed a pea-size opening at the right corner of the vaginal vault having a free flow of urine through it. The difficulty in separating bladder during operation led to the suspicion of vesico-vaginal fistula.

On the same day, an indwelling catheter was reinserted with a suction drainage as shown in Fig. 1. She was simultaneously

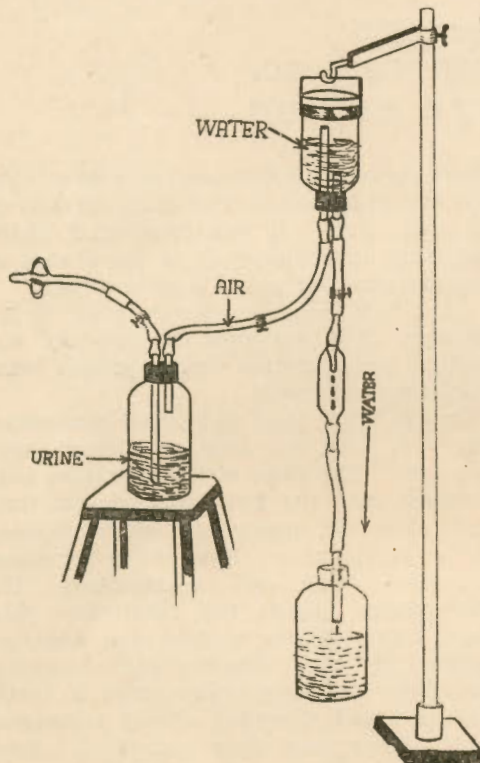


Fig. 1

Diagram showing continuous suction drainage used in treatment of these cases.

given prednisolone tablets in a total dose of 30 mg. per day. Madribon tablets were given twice daily for six days. The dose of prednisolone was reduced on the 7th day by 5 mg. and subsequently daily by 5 mg. and omitted on 11th day. The total dose was 255 mg. in 11 days. The suction drainage was omitted on the 14th day.

The bacteriological report of abdominal wound yielded staphylococcus aureus responding to broad spectrum antibiotics.

The urine culture showed *B. coli*, resistant to tetracycline and chloramphenicol. The blood urea and urine output during this period were normal. The bed wetting stopped on the 3rd day. On the 24th day following operation and 18th day following reinsertion of catheter, the indwelling catheter was removed. The patient emptied the bladder every 3 hours. A month after hysterectomy the patient was discharged. An intravenous pyelography 3 months later revealed no abnormality.

#### Case 2

Mrs. L. G., IVth para, was admitted at term, with a history of hand and cord prolapse of 8 hour's duration. The labour pains had ceased 2 hours before admission. B.P. was 120/80 mm. of mercury and pulse 120/min.

Local examination showed a tense uterus up to the xyphisternum. The uterine contour was not demarcated near the left lower border. The left lower border was resonant as if it was covered by colon. The retraction ring was palpated at the umbilicus.

Pelvic examination showed a prolapsed hand and a loop of cord without pulsations at the introitus. The shoulder was impacted below the level of the ischial spines. The cervix was fully dilated and taken up. The neck was easily accessible in the mid pelvis. The foetal head was on the right side.

Decapitation was performed under general anaesthesia without much difficulty. After this operation, a speculum examination showed no abnormality of vagina and the cervix. The uterine cavity on manual exploration, showed vertical tear along its left border. An abdominal exploration showed an incomplete rupture and old haematoma with a tear along the left border. The tear was sutured and tubes ligatured by modified Pomeroy's method.

Post-operatively she received usual care following laparotomies. Next morning, bed wetting was the predominant symptom. The indwelling catheter drained an ounce of urine. The patient had a vesico-vaginal fistula on the left side in the anterior fornix which was confirmed by palpation and by injecting sterile milk. The fistula admitted the tip of an index finger easily. Sub-



sequent management was the same as mentioned for the first case. The indwelling catheter was removed on the 28th day. A speculum examination revealed scarring in the anterior fornix and no dribbling. She was discharged 5 weeks following admission.

### Discussion

Russell (1956) quotes 3 to 7 months as the period for spontaneous closure of urinary fistulae. Both the above cases healed within 4 weeks following their detection. If the period of persistence of fistula prolongs beyond 8 weeks, its spontaneous closure is unlikely. This is usually the stage of perifistular fibrosis and once this sets in, one cannot expect spontaneous closure. Prolongation of fistula beyond 12 weeks calls for detailed investigations and proper corrective measures before the kidney atrophies.

Moir (1956) suggests a suction drainage for proper healing following fistula repair. The suction drainage employed in above cases was the modification of the one suggested by Moir and is shown in Fig. 1. Decompression of bladder is a vital necessity in spontaneous healing of a fistula; it assists in narrowing the gap, so that repair can proceed satisfactorily. Though it is advantageous over the usual gravity drainage, its proper care is essential for its desired function.

Collins (1957) explored the possibility of use of steroids prior to repair of fistulae. The use of steroids in above cases was mainly to achieve good vascularity at the healing site. The belief that steroids weaken the scar is to be borne in mind and their prolonged use beyond a certain period should not be carried out. It

is also necessary to use simultaneously appropriate chemotherapeutic or antibiotic therapy.

The nature of operative trauma and its prevention is adequately stressed by Counseller (1956). Yet, the occasional cases described above if detected in time and treated on the principles mentioned above, offer a good chance of spontaneous healing.

The cause of trauma in case 1 is likely to be the clamp on the Mackenrodt's ligament or the injury to the bladder wall during its separation from the cervix. This case also warns that an indwelling catheter in suspected cases of bladder injury does not necessarily prevent the formation of fistula but it may only postpone its occurrence. A careful follow up of these suspected cases should be done, as the commonest time for fistula formation is 7th-12th post-operative day. This is the time the patients are usually discharged from the hospital; by the time they are readmitted, valuable interval promoting spontaneous closure is lost.

The operative trauma of the second case may be directly due to instruments used in decapitation. The trauma to bladder, following obstetric operations, should be given longer time for spontaneous closure than in gynaecological cases. This statement is made because the process of involution of roomy post-parturient vagina is slower than uterine involution. The reduction in vaginal lengths following child-birth greatly improves the chances of spontaneous closure of a large sized vesico-vaginal fistula which may appear impossible at the time of its diagnosis.

### Conclusions

(1) Two case reports of vesicovaginal fistulae, following total abdominal hysterectomy and decapitation, are presented.

(2) Factors aiding spontaneous closure are discussed.

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and courage during the period of the spontaneous closure, failing which, this treatment would have been impossible to put into practice.

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