

Role of drainage in surgical repair of vesicovaginal fistula

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Vesicovaginal fistula (VVF) has been a major social problem and surgical challenge to the gynaecologist for centuries. Even today in many underdeveloped countries obstetrical problems like prolonged labour and obstructed labour leads to development of VVF which are real challenge to the urogynaecologists. Of course, in the developed countries causes of VVF are different mostly gynaecological (1/1800 hysterectomies) [1]. Now a days, electrical burn during laparoscopic surgery (e.g. total laparoscopic hysterectomy) has become another new cause of this problem.

James Marion Sims [2], in 1852 reported successful repair of VVF in female slaves – on his 30th surgical attempt on a slave [3]. He used silver wire for repair and urethral catheter for bladder drainage [4].

For successful repair of VVF, adherences to the principle of fistula closure are: optimal tissue condition, adequate exposure and tension free closure. These principles still hold good in 21st century. No sophisticated gadgets are required for its repair. It needs a skilled, experienced hand and dedicated coordinated effort of a group of trained supporting staff for successful repair of VVF.

For success of a vesicovaginal fistula the following factors are commonly considered: 1) Site of fistula, 2) Size of fistula, 3) Cause of fistula, 3) Scar tissue, 4) Fixity to bone, 5) Adequate mobility of flaps, 6) Adequate tension of suture, 7) Suture material, 8) Haemostasis, 9) Adequate drainage. To achieve an optimum repair with favorable outcome we need: a)

Good exposure of the fistula and b) Adequate vascularity.

For proper exposure we need to select a proper approach for the particular fistula as follows: 1) Vaginal repair – mostly preferred, 2) Trans vesical – in difficult fistula, complicated and massive fistula, 3) Combined abdominal vaginal approach : mostly in difficult massive fistula following obstructed labour, complicated fistula or traumatic difficult fistula, 4) Transvesical and transperitoneal : in some difficult fistula specially where fistula is badly adhered to bowel following diathermy burn in total laparoscopic hysterectomy, 5) Suchardt incision is some time required to enlarge the vaginal orifice to facilitate vaginal repair.

Adequate vascularity is a prerequisite for fistula repair. For this following points are to be considered: 1) Adequate spacing in between time of occurrence of fistula and operation. This is ideally considered as 3 months. It is the same in case of repeat repair for recurrent fistula. 2) Adequate drainage of the urinary bladder before operation whenever possible. 3) Proper and optimum tension on tissues of sutures during repair. 4) Avoiding unnecessary cauterization of blood vessels. 5) Using graft for vascular support as well as physical support whenever necessary i.e: maurtius graft, omental/peritoneal graft, gracillis muscle graft, ileocystoplasty [5].

Besides all these, drainage of the urinary bladder has paramount importance for successful repair of VVF. Because in spite of all these efforts and

meticulous repair, blockage of the urethral catheter in

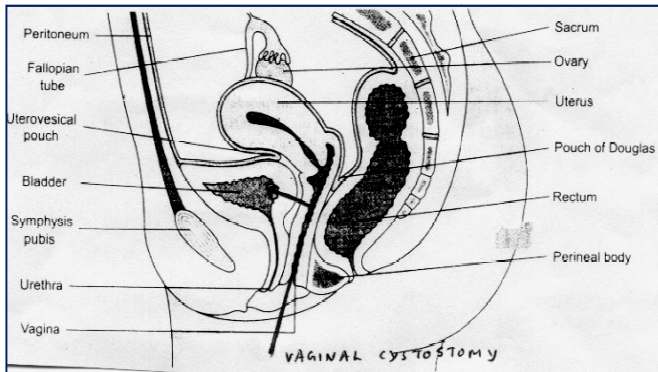


Fig 1: Vaginal Cystostomy

the postoperative period may turn the whole effort a futile one. From my personal experience of last 3 (three) decades, I have realised that more than one

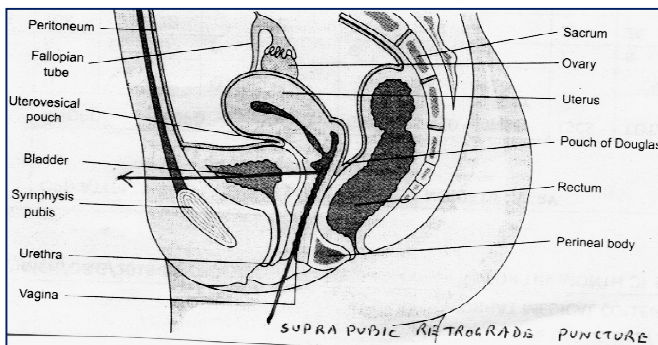


Fig 2: Suprapubic Retrograde Puncture

catheter drainage is always safe for VVF repair. I always prefer to keep more than one catheters whenever situation demands. Some of the different ways of bladder drainage are: 1) Urethral, 2) Suprapubic - direct and retrograde puncture (innovation of the author) 3) Ureteral used in difficult cases, 4) Vaginal cystostomy – rarely done (Fig 1 & 2).

The suprapubic retrograde puncture technique of catheterization is an innovative procedure developed by the author and practised for last 25 yrs (since 1990). Out of my personal series of 90 VVF repair in 30 cases of vaginal repair this technique was employed. This

technique does not require any sophisticated instrument; it needs only a single retrograde metallic catheter, and a malecot catheter. Following are the advantages of the procedure:

1. Takes very little time in comparison to conventional suprapubic cystostomy. Hardly require 2 to 5 minutes.
2. Minimal blood loss.
3. Minimal tissue damage and skin incision.
4. No specialised instrument required.
5. Facilitates continuous uninterrupted drainage of the bladder even if the urethral catheter is blocked.
6. Useful for giving retrograde bladder irrigation when necessary to clear and wash the bladder in some difficult situation.

Conclusion

Proper bladder drainage following VVF repair is a key point for successful repair. Suprapubic retrograde bladder drainage is a cheap, convenient and efficient technique. Repair of VVF does not involve much sophisticated instrumentation but needs- experience, dedication, expertise and combined systematic team effort.

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