Vesicovaginal Fistula : A New Treatment Modality

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Introduction

Vesicovaginal fistulas could be obstetric in origin due to prolonged/obstructed labour, surgical trauma, gynaecological due to operative complications, malignancy or irradiation. Usually these fistulas have to be repaired surgically but have a high chance of recurrence as sutures inserted for closure of the fistula cut through traumatized tissue and may cause ischaemia. Conventional methods of haemostasis such as sutures or electro coagulation leads to further damage of the scarred tissue leading to failure of fistula repair.

To circumvent these disadvantages of a surgical approach, we used fibrin sealant (Tissucol) for repair of a vesicovaginal fistula.

Case Report

A 41 year old lady presented with the complaints of persistent urinary incontinence for the past three years. The patient was a para one abortion zero with a full term normal delivery, 19 years ago. She had normal menstrual cycles of 3-4/30 days. In her past history, this patient had a myomectomy 11 years ago for fibroid uterus. She subsequently underwent a total abdominal hysterectomy for recurrence of fibroid uterus along with cervical fibroid. After hysterectomy the catheter was removed on the eighth postoperative day and the patient noticed urinary incontinence. She was recatheterized for one month and symptoms were relieved. She had recurrent urinary tract infection (UTI), which responded to conventional treatment. Three years ago, the patient was detected to have a left ovarian cyst and a left salpingo-oophorectomy was done. The patient was not catheterized in the immediate postoperative period but on the fifth postoperative day she noticed urinary incontinence. She was put on continuous Foley's catheter drainage for three weeks but urinary incontinence persisted. The catheter was removed and the patient discharged. Her family and personal history were not contributory. Her general and systemic examination were within normal limits. Abdominal examination revealed a soft abdomen with two vertical infra

umbilical and one supra pubic scar marks. Liver and spleen were not palpable. Per speculum examination revealed that the vagina and vault were wet with urine. A 0.5 x 0.5 cm fistula was visualized at the vault in the center. On per vaginal examination the vault was supple with no palpable mass. On investigation, complete haemogram, urine routine examination, serum electrolytes, renal function tests, ultrasound (abdomen and pelvis) were within normal limits. A three-swab test done confirmed the fistula to be vesicovaginal. Intravenous pyelogram (IVP) showed normally functioning kidney with normal ureteric outline.

The patient was taken up for cystoscopy, which revealed a scarred area on the posterior wall of the bladder above the trigone with a fistulous opening. A probe was passed through the fistulous opening in the vagina and the fistulous opening in the bladder was localized by cystoscopy being done at the same time. In view of the prolonged history of the patient, multiple surgeries and small size of the fistula, a decision was taken to attempt sealing of the fistula with fibrin sealant.

Under cystoscopic guidance and local anaesthesia, a probe was passed through the fistulous opening in the vagina and margins of the fistula traumatized, in an attempt to freshen the margins. The cystoscope was removed and 2ml of reconstituted fibrin glue (Tissucol) was injected into the fistulous opening in the vagina using a Duploject syringe. The patient was then put on a continuous Foley's catheter for seven days. The patient had no leakage of urine in the postoperative period. The patient had no incontinence of urine after catheter removal and she was voiding satisfactorily. The patient was followed up at three months, when she was found to be asymptomatic and extremely satisfied with the procedure.

Discussion

A vesicovaginal fistula causes mental and physical distress to a patient very often resulting in her being a social outcast. Surgery has so far been the gold standard of treatment for this condition but there is a high failure rate. To circumvent these problems of surgical

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intervention, the concept of using fibrin sealant (Tissucol) to seal small fistulas took birth. Fibrin sealant application for fistula repair has advantages [1], such as optimal haemostasis without electrocautery or sutures, grafting of autologous tissue by direct adhesion without sutures and enhanced fibroblast proliferation which improves tissue regeneration. We have used this method in only one case with favourable result but others have also found good results [2-4].

The selection of cases for treatment with fibrin sealant is very important in the opinion of some workers [5], who opine that the fistula must be recent, the edges of the fistulous opening must be scrapped before application of fibrin sealant and fibrin must be injected under the mucosa to plug the fistulous opening. Early results are encouraging and the use of this technique may produce revolutionary results that will modify the approach to fistula management.

Conflicts of Interest

None identified

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