Abstract:

Aim of the study: To evaluate patients selection for early of vesicovaginal fistula by transbdominal transperitoneal approach with omental flap interposition.

Patients and methods: Twenty four female patients with vesicovaginal fistula underwent repair by transabdominal transperitoneal approach in Al-Hilla Teaching hospital department of urology between 2000-2006. Their ages between 23-45 years, the cause of the fistula was cesarean section in 20 patients (83.8%) and 4 patients (16.2%) the cause was hysterectomy.

Results: The indications for cesarean section were midwife interference in 16 patients, were rupture uterus identified, other indications were placenta previa 2 patients, fetal distress 1 patient and previous cesarean section in 1 patient, while the indications for hysterectomy were dysfunctional uterine bleeding in 3 patients and big uterine fibroid in 1 patient. Over all success rate were 22 patients (88.3%) had successful repair with only 2 patients (11.7%) were failed.

Conclusion: Early repair of vesicovaginal by the transabdominal transperitoneal omental flap give good results in patient with first time fistula and no vaginal infection present and inflammatory process at fistula site has resolved.

Introduction:

Vesicovaginal fistula causes serious social and psychological problem, with social cut-off and divorce in some cases. In our social culture these female under go further psychological trauma when they are unable to perform their religious duties(1).

Vesicovaginal fistula secondary to obstetrical causes is A rare consequence in developed countries 5-
8% (2-3), while in developing countries still is the commonest cause (4-6) as poor socioeconomic class suffer the most lack of the proper antenatal care, neglected prolonged labor in the hands of untrained person is the major cause of the vesicovaginal fistula (7). Various methods of the surgical repair are adopted with different indications and success rate up to 90% (2-8). Transvaginal approach used by gynecologist (9), and transabdominal by urologist (9-10) particularly in cases of fistula is too large to be repaired transvaginally.

Some authors have reported encouraging result using fibrin glue as an sealant for vesicovaginal fistula, thus the endoscopic injection of fibrin glue may be minimally invasive treatment alternative for correction of vesicovaginal fistula (11).

Advantages of laparoscopic vesicovaginal fistula repair in patients had been undergone multiple surgical attempts through the vagina and patients faced final repair through large abdominal incision, while by laparoscopy can repair the fistula with great details and complete visualization than either abdominal or vaginal approach.

patients and methods

Twenty four female patients with vesicovaginal fistula underwent surgical repair by transabdominal approach in Al-Hilla teaching hospital department of urology between 2000-2006, their ages between 24-45 years.

Full history and complete physical examination followed by following investigations: general urine examination, urine culture and sensitivity, complete blood count, blood urea, serum creatinine, abdominal sonography and intravenous pyelography.

Cystoscopic Finding: All fistula were supratrigonal average size between 2-5 cm., stenting of ureteric orifices were showed no obstruction. Concomitant vaginal examination were done.

Operative Procedure:

- Anesthesia: General.
- Position: Supine with head down.
- Incision: Lower midline.

Peritoneum opened, bladder hisected and both ureteric orifices stented with 5f feeding tube and the fistula tract excised, both vaginal and bladder wall separated, vaginal wall sutured by (0) vicryl and the bladder also sutured by (0) vicryl in two layers. Omental flap was inserted between the bladder and the vaginal wall. Bladder drained by 20F Folys catheter with tube drain left retropubically, then the wound closed in layers.

Post–Operative: Parenteral antibiotic continued for three days using third generation cephalosporin, aminoglycoside and metronidazole. Retropubic drain removed between third and fifth post operative day. Foley catheter removed between 14-21 days accordingly.

RESULTS

Twenty four patients with vesicovaginal fistula after cesarean section in 20 patients and 4 patients had hysterectomy (Table 1). The indications for cesarean section were midwife interference in 16 patients were rupture uterus identified, other indications were placenta previa in 2 patients, fetal distress in 1 patient and previous cesarean section 1 patient (Table 2).
Indication for hysterectomy were dysfunctional uterine bleeding in 3 patients and big fibroid in one patient (Table 3)

All patients underwent catheterization between 14-21 days as trial of conservative treatment but with no success.

Table 1: Causes of Vesicovaginal fistula

<table>
<thead>
<tr>
<th>Number of Patients</th>
<th>Cause of Fistula</th>
</tr>
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<tbody>
<tr>
<td>20</td>
<td>Cesarean Section</td>
</tr>
<tr>
<td>4</td>
<td>Hysterectomy</td>
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</tbody>
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Table 2: Indications for cesarean section

<table>
<thead>
<tr>
<th>Number of Patients</th>
<th>Cause</th>
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</thead>
<tbody>
<tr>
<td>16</td>
<td>Rupture uterus &quot;midwife interference&quot;</td>
</tr>
<tr>
<td>2</td>
<td>Placenta previa</td>
</tr>
<tr>
<td>1</td>
<td>Fetal distress</td>
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<tr>
<td>1</td>
<td>Previous cesarean section</td>
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</tbody>
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Table 3: Indication for Hysterectomy

<table>
<thead>
<tr>
<th>Number of Patients</th>
<th>Cause</th>
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</thead>
<tbody>
<tr>
<td>3</td>
<td>Dysfunctional uterine bleeding</td>
</tr>
<tr>
<td>1</td>
<td>Big fibroid</td>
</tr>
</tbody>
</table>

Discussion

In developed countries genitourinary fistula is rarely seen as complication of pregnancy while in developing countries prolonged obstructed labor is still a common cause of genitourinary fistula (9), this is mainly due to good antenatal care in developed countries and reduction in length of second stage labor causing eradication of obstetrical genitourinary fistula(13).

Situation in our province is different as 75% of our patients with vesicovaginal fistula belonged to rural and poor socioeconomic class of urban population were traditional birth attendance had attempted vaginal deliveries initially and then they were taken to near by doctor or hospital after delay for 24-72 hours.

Surgical repair of vesicovaginal fistula was started century ago but since that controversy on the time of the repair and route of the repair, the traditional approach had been to wait at least 3-4 months before attempting fistula however this philosophy had been
challenged some surgeon have successfully closed fistula with or without tissue interposition. In the past, the surgical repair of any fistula before 3 months was discouraged for fear of recurrence and in adequate of healing.

However the principle of the delayed repair no longer an absolute principle the timing of fistula repair, now is dictated by the nature of the local tissue around fistula site, surgical repair if no vaginal infection is present and if inflammatory process at the fistula site has been resolved. We treated our patients usually after period of catheterization and antibiotics for 2-3 weeks if this failed then we go to surgical repair if on vaginal infection present and all patients treated by transabdominal transperitoneal approach with omental flap interposition and successful rate of 88.3% as compared to 88.87% by ABDULMANNAN (9). The lower incidence of success rate occur due to patient selection, patient with complicated fistula or involvement of ureteric orifice, posterior wall involvement, sphincteric damage, big fistula size, extensive scarring, multiple fistulae and bladder neck destruction (15). In our patients as patient selected had fistula size 2-5 cm all were simple and no bladder neck or ureteric orifice involvement the cause of fistula repair failure in our two patients were post operative infection at site of fistula repair lead to give up the wound and recurrence of the fistula, but still the following factors remain controversial the timing of the operative repair, surgical approach, excision of fistula tract and use of local tissue flap.

In spite of controversy about excision of fistula tract (16). All the patients in present study underwent excision of fistula tract with careful closure of the bladder and vagina with omental interposition after bisection of the bladder and identification of the fistula tract.

**Conclusion**

Early transabdominal transperitoneal omental flap repair for vesicovaginal fistula should be restricted for patients with fistula for first time, no vaginal infection and inflammatory process at site has resolved.

**References**


