Cases Reports

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CLOSURE OF NEOBLADDER-VAGINAL FISTULA IN PATIENT WITH STUDER NEOBLADDER USING VAGINAL APPROACH AND INTERPOSITION OF MARTIUS FLAP

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Summary.- *OBJECTIVE: We report a case of neobladder-vaginal fistula in a patient, as well as its closure using a Martius flap interposition.*

METHODS: A 51 year old patient required a cystectomy and Studer neobladder for invasive bladder adenocarcinoma. After urethral catheter removal she presented constant leakage and was diagnosed by cystoscopy of neobladder-vaginal fistula.

RESULTS: This complication was successfully treated using a vaginal approach with two layers closure and a Martius flap interposition.

CONCLUSIONS: Neobladder in women is a rare indication, as it is the eventuality of presenting this kind of fistula. The adequate approach to treat them is still controversial. In our experience and after reviewing literature we think vaginal closure using a Martius flap interposition is a good technique to treat a neobladder-vaginal fistula.

Keywords: *Neobladder. Fistula. Vagina. Martius flap.*

Resumen.- *OBJETIVO: Presentamos el caso de una fístula neovésico-vaginal en una paciente, así como su cierre mediante interposición de colgajo de Martius. Se realiza una revisión bibliográfica de este tipo de complicaciones.*

MÉTODOS: Paciente de 51 años que requirió de una cistectomía y neovejiga tipo Studer por adenocarcinoma vesical infiltrante. Tras la retirada de la sonda uretral presentó incontinencia urinaria y fue diagnosticada mediante cistoscopia de una fístula neovésico-vaginal.

RESULTADOS: Dicha complicación se resolvió de forma exitosa por abordaje vaginal mediante el cierre en dos planos y la interposición de un colgajo de Martius.

CONCLUSIONES: La creación de una neovejiga es una indicación poco frecuente en mujeres, como también lo es la eventualidad de presentar este tipo de fístulas, y la mejor vía de abordaje para tratarlas es aún tema de discusión. En nuestra experiencia y tras revisar la literatura pensamos que el cierre vaginal con interposición de colgajo de Martius es una buena técnica para tratar la fístula neovésico-vaginal.

Palabras clave: *Neovejiga. Fístula. Vagina. Colgajo de Martius.*

CASE REPORT

We report a case of a 51 y.o. woman that after diagnosis of invasive bladder tumour on june 2006 she was submitted to radical cystectomy with bilateral iliac and obturator lymphadenectomy, hysterectomy, left adnexectomy and performance of Studer neobladder. Most of the vagina was excised, leaving external third that was closed with single knots of 3/0 vycril.

Pathologic exam confirmed dyagnosis of high grade coloid mucinous bladder adenocarcinoma, stage pT2N0M0.

Patient presented uneventful postoperatory, extracting ureteral catheters 7 days after surgery and suprapubic drainage 9 days after. Before extracting urethral cathe-

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ter it was practiced cystography which described pericatheter urine reflux which solved by pulling the catheter (Figure 1). Urine leakage was not observed. Urethral catheter was extracted 28 days after surgery. In later controls patient referred urine leakage, but couldn't define if it was per vagina or urethra. Exploration demonstrated correct vaginal suture without visible lesions, but vaginal leakage was observed.

Finally, cystoscopy was performed which demonstrated 8 mm fistula at the urethro-ileal anastomosis, corresponding with reflux described in cystography.

RESULTS

Urethral catheter was reinserted and fistula closure with vaginal approach using Martius fatty-fibrous flap interposition was performed. Neobladder wall was closed using continuous suture with 4/0 monocryl (Figure 2), and Martius flap, dissected from right major lip, was fixed over the suture using 4/0 quick vicryl (Figure 3). Vaginal mucosa was closed using single knots of 3/0 vicryl.

Patient presented uneventful postoperatory recovery without complications, and was discharged 5 days after intervention with urethral catheter and suprapubic drainage. Urethral catheter was extracted 10 days after the intervention and suprapubic drainage 30 days after.

A year after the intervention fistula has not reappeared.

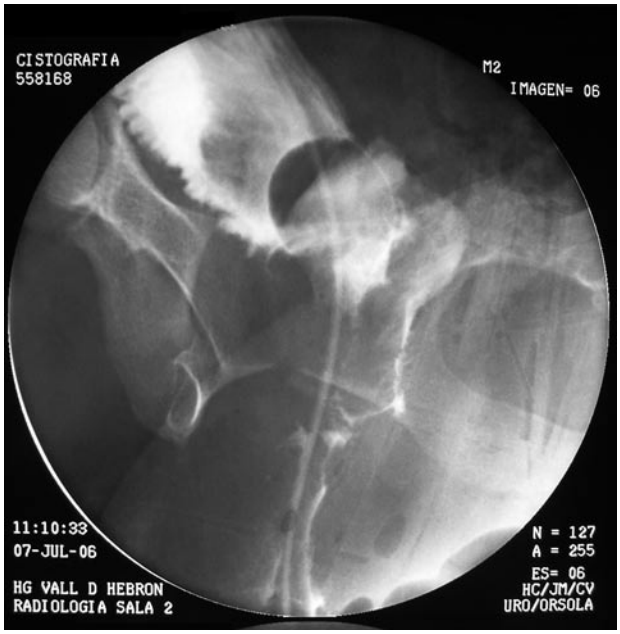

FIGURE 1. Cystography through urethral catheter which described pericatheter urine reflux.

DISCUSION

First serie of neobladder after cystectomy for bladder neoplasia in women was described by Tscholl et al in 1987 with good results (1). However, this technique didn't become popular until 10 years after, among other reasons because it was believed that urethrectomy was mandatory for oncological cure and that these kind of reservoires couldn't be continent (2). Neobladder-vaginal fistula is a quite unfrequent complication in these patients, and treatment of choice is still in discussion. Hari et al reviewed 11 cases of neobladder-vaginal fistula described in literature until 2004 (3). Incidence and resolution of neobladder-vaginal fistula on biggest series published are described on table 1 (2,4-9).

Among factors predisposing fistula formation it has been described unadverted lesion of vaginal wall at the urethra level, latter pelvic radiotherapy and local recurrence on fistula apperaing more than 3 months after surgery. It can also be favourished by ischemia due to suspension sutures of the vaginal wall to the obturator muscle in cases in which it was intended to avoid vaginal prolapse (5).

Various techniques have been proposed to minimize the risk of this comoplication, as interposition of omentum flap between vagina and neobladder or the preservation of vaginal wall (7), but effectiveness of this measures are not clearly demonstrated.

Media time until fistula appearance is generally between 3 and 5 months after surgery (5,6). Some authors defense combined approach (suprapubic and vaginal) beacuse high incidence of fistula recurrence (5), while others like Ali-el-Dein et al describe successful closure of these lesions using vaginal approach (6).

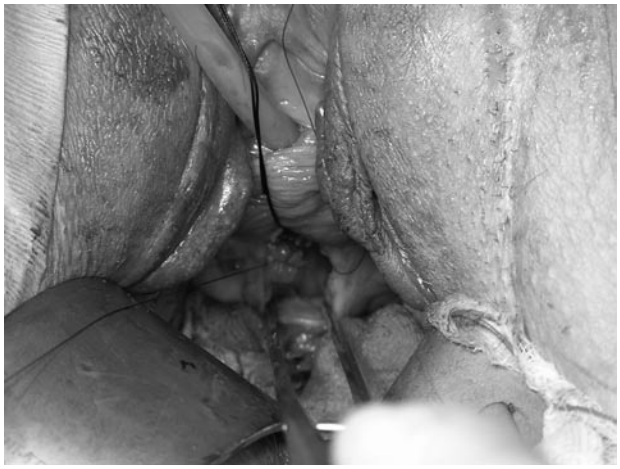

FIGURE 2. Neobladder orifice closure with 4/0 monocryl.

TABLE I. INCIDENCE AND RESOLUTION OF NEOBLADDER-VAGINAL FISTULA.

	n	Vaginal preservation	Incidence	Resolution	Via de abordage
Ali-el-Dein et al.	136	0%	3%	100%	Vaginal
Abol-Einen et al.	80	0%	4%	100%	Vaginal
Stein et al.	34	0%	0%	...	...
Rapp et al.	37	100%	10%	25%	Abdominal
Chang et al.	25	84%	5%	Not refered	Not refered
Hautmann et al.	13	0%	0%	...	...

In our case vaginal approach with interposition of Martius flap was elected because is a technique used with success in closure of complex badder-vaginal fistula, avoiding approach through a previously operated abdomen. Interposition of a fatty flap from major lip allows major epithelization surface, extra vascularization on problem zone and better lymphatic drainage, as well as avoidance of suture overlapping (10).

CONCLUSIONS

Neobladder in women is a rare indication, as it is the eventuality of presenting this kind of fistula. The adequate approach to treat them is still controversial. In our experience we think vaginal 2 layers closure using a Martius flap interposition is a good technique to treat a neobladder-vaginal fistula before attempting abdominal approach or creation of a new reservoir.

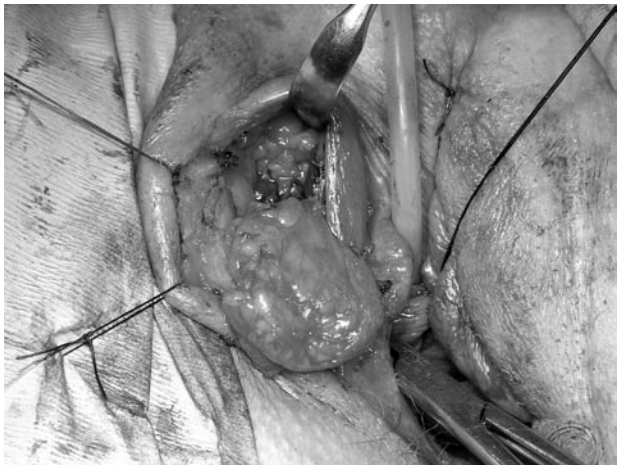

FIGURE 3. Dissection of Martius flap and transposition over the suture line.

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