



URETEROVAGINAL FISTULA-DILEMMAS IN DIAGNOSIS AND MANAGEMENT

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ABSTRACT **Aims and Objective:** Urinary leakage following gynecological surgery is a distressing complication. The incidence of iatrogenic ureteral injury during major gynaecological surgery is 0.5 to 2.5 percent. Diagnosis and management of UV fistula is straight forward in majority of the cases. There are certain subsets of patients who present late to physician with persistent vaginal leak in such patients diagnosis with conventional radiography is difficult or may present with apparently normal radiological findings. Materials and methods: This was a retrospective observational study conducted at our institute from Jan 2006 to Jan 2021. Patients who presented to urological opd with vaginal leak of urine for more than 6 months post-surgical procedure are evaluated. Results and Observations: Initial assessment included vaginal speculum examination to assess the anterior and posterior vaginal walls for any fistulous opening or any leak from lateral fornix. The standard three-swab test was then performed to differentiate between vesico vaginal and Uretero vaginal fistula and to rule out stress incontinence. Intravenous urography findings in women with ureteric fistula found to be normal in 7.69 %. In our study we perform clinical and speculum examination, three swab test, ultrasound, excretory urogram, cystoscopy, retrograde pyelogram, cone tip or bulb tip retrograde pyelogram, Ureteroscopy and cannulation of the fistulous tract was done. Ureteric reimplantation was done in all case out of which three cases modified Lich-Gregoir procedure was done remaining cases required psoas hitch.

KEYWORDS : UV fistula – ureterovaginal fistula, RGP- retrograde pyelogram, cone tip or bulb tip RGP, excretory urogram, vesico vaginal fistula, three swab test.

INTRODUCTION

Urinary leakage following gynecological surgery is a distressing complication. The incidence of iatrogenic ureteral injury during major gynaecological surgery is 0.5 to 2.5 percent. Diagnosis and management of UV fistula is straight forward in majority of the cases there are certain subset of patients who present late to physician with persistent vaginal leak in such patients diagnosis with conventional radiography is difficult or may present with apparently normal radiological findings. These Patients also failed to respond with minimally invasive procedures like ureteral stenting which is first line treatment of Uretero vaginal fistula. This study aims to identify and propose a diagnostic algorithm for such patients.

METHODOLOGY

This was a retrospective observational study conducted at our institute from Jan 2006 to Jan 2021. Patients who presented to urological opd with vaginal leak of urine for more than 6 months post-surgical procedure are evaluated with USG KUB, IVP, vaginal speculum examination, three swab test, cystoscopy, RGP (bulb tip or cone tip), Ureteroscopy and vaginoscopy, Cannulation of the fistula with the guide wire. Data was entered and analyzed in MS-Excel and descriptive statistics were used to present data

Inclusion Criteria

1. Vaginal urine leak with inconclusive clinical and radiological findings
2. Patient with vaginal urine leak from lateral vaginal angle suspected to have UV fistula but not relieved by dj stenting

Exclusion criteria

Patient with clear diagnosis of UV fistula and obvious finding of UV fistula on radiological investigations Total 8 patients who met inclusion criteria were included in our study were evaluated of the above diagnostic modalities and outcomes were tabulated in Table 1

Results

Initial assessment included vaginal speculum examination to assess the anterior and posterior vaginal walls for any fistulous opening or any leak from lateral fornix.

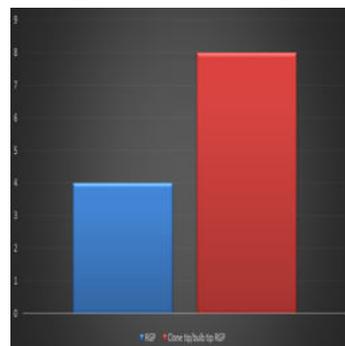
Out of 8 patients regular RGP was conclusive in 4 patients only. Round

tip or bulb tip RGP identifies fistulous tract in all 8 patients and we have cannulated fistulous tract in 6 patients only

Table No 1

SNo	Investigative modalities performed	Findings
1	Clinical examination /per speculum examination	Positive for UV fistula in all patients
2	ultrasound	normal
3	Excretory urogram	Inconclusive in all patients
4	cystoscopy	normal
5	RGP	Identified fistulous tract in 4 patients only
6	Cone tip/bulb tip RGP	Identified fistulous tract in all patients
7	Ureteroscopy and cannulation of the fistulous tract	6 out of 8 patients

CHART NO 1



DISCUSSION

Uretero vaginal fistula is a rare complication of hysterectomy and cesarean delivery. Uretero vaginal fistula should be ruled out in all

patients who present with continuous urinary leakage after obstetric or gynaecological surgery.

The symptom that most differentiates Uretero vaginal from vesico vaginal fistula is the sensation to void and hold a normal bladder capacity, as the unaffected ureter continues to fill the bladder in the case of an Uretero vaginal fistula.

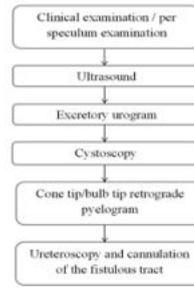
A thorough history and physical examination should be performed. Initial assessment included vaginal speculum examination to assess the anterior and posterior vaginal walls for any fistulous opening or any leak from lateral fornix.

The standard three-swab test was then performed to differentiate between vesico vaginal and Uretero vaginal fistula and to rule out stress incontinence.

Number of studies considered excretory urography, retrograde pyelography and cystography essential for diagnosis of Uretero vaginal fistula. A study on Intravenous urography findings in women with ureteric fistula find that normal findings in 7.69 %

In our study we perform clinical and speculum examination, three swab test, ultrasound, excretory urogram, cystoscopy, retrograde pyelogram, cone tip or bulb tip retrograde pyelogram, Ureteroscopy and cannulation of the fistulous tract was done

Patient complains of continuous urinary leakage following surgical procedure



Conclusion

A subset of patients with UV Fistula involving juxta vesical, intra mural segments of ureter presenting late can have normal findings on conventional radiography Although diagnosis of UV fistulae is obvious in most cases there is a subset of patients in whom clinical examination, conventional radiological investigations are near normal posing a diagnostic dilemma In such cases careful clinical and endoscopic assessment with bulb tip pyelogram and if possible Ureteroscopy with cannulation of fistulous tract can give conclusive diagnosis

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FIG 1

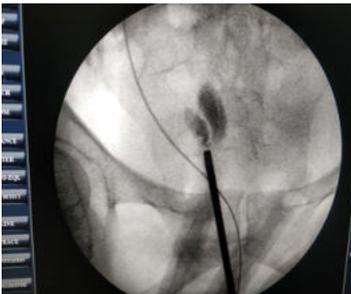


FIG 2



FIG 3



FIG 4

Pathway for diagnosis of UV Fistula