

Fistula

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What is Vaginal Fistula?

- A fistula is an abnormal connection that has developed between the two
 organs in the body or between the skin and any organ in the body. An
 abnormal connection that has been, formed in the wall of the vagina is known
 as <u>vaginal fistula</u>. There are four main kinds of fistula:
 The passage or hole that forms between the vagina and urinary tract is known
 as vesicovaginal fistula.
- The passage or hole that forms between the vagina and the rectum is known as rectovaginal fistula.
- The passage or hole that forms between the vagina and the colon is known as colovaginal fistula.
- The passage or hole that forms between the vagina and the bowel is known as enterovaginal fistula.

Causes of Vaginal Fistula:

- The most common cause of the vaginal fistula is a breakdown of tissue in a specific area in the organ. The damaged tissue forces the fistula to open up. Vaginal fistula is common among young mothers. Sometimes, after delivery complications such as vaginal, bladder, or <u>rectal damage</u> can also cause vaginal fistula. Some other causes of vaginal fistula include: <u>Crohn's disease</u>
- Diverticulitis
- Inflammation in the bowel
- Perineum tear after childbirth
- Ulcerative colitis
- Surgery of the vagina, rectum, or anus
- Infection in the abdomen
- Injuries during child birth

- OBSTETRICAL CAUSES
 - TRAUMATIC FISTULA
 - Instrumental Vaginal delivery such as destructive operations or forceps specially with kielland.
 - Injury inflicted by bony spicule of the fetal skull in craniotomy operation
 - In Caesarean section
 - At risk in patient with previous LSCS
 - if bladder is caught in the suture can cause ischemia leading to fistula formation
 - Ligation of main branch of uterine vessels in case of hemorrhage due to lateral extension of transverse incision in LSCS→ Ureters are at risk of injury
 - Rupture of scar of previous LSCS can implicate adherent bladder base

In such direct traumatic injury, fistula and incontinence follows soon after delivery

Symptoms of Vaginal Fistula:

- The symptoms of vaginal fistula depend upon the size and the location of the fistula. If symptoms are present from long time, there is a risk of developing an infection. It is important to consult a <u>physician</u> or a <u>gynaecologist</u>, if any of the following symptoms occur. Gas is released from vagina
- Urine incontinence
- Pus in the vagina
- Soreness around the genital area
- Foul smelling vaginal discharge
- Pain during sexual intercourse
- Irritation and discomfort in vagina

Diagnosis of Vaginal Fistula:

- There are various methods used for the diagnosis of a vaginal fistula. The doctor will start a
 diagnosis by doing a physical exam. This physical test will examine the defected vagina,
 premium, or anus. A doctor may also use a speculum to look inside your vagina. Other
 diagnostic tests done for diagnosis of vaginal fistula areCT (Computerised tomography) scan
- MRI (Magnetic Resource Imaging)
- Blood test
- Urine analysis
- Anorectal manometary
- Ultrasound
- Contrast tests
- Blue dye test

CONFIRMATION OF DIAGNOSIS

Dye test

Methylene blue introduced into bladder by a catheter → dye will be seen coming through the opening

- Three Swab test /Tampon test of Moir
- Double dye test

Give patient oral phenazoyridine, fill the bladder with the blue tinted solution and insert a tampon. Presence of blue staining suggest- VVF or urethrovaginal fistula

Red staining (pyridium)→ suggest ureterovaginal fistula

- Metal catheter passed through external urethral meatus into the bladder when comes out through the fistula in vagina confirms VVF and patency of urethra
- Examination under anaesthesia

Imaging studies

- Radiologic studies are recommended prior to surgical repair of a vesicovaginal fistula to fully assess the defect and exclude the presence of multiple fistulae
- Intravenous urography- for the diagnosis of ureterovaginal fistula
- Retrograde pyelography- if IVP negative and high suspicion of ureterovaginal fistula
- Cystography- done in complex fistula
- Sinography (fistulography)- for intestinogenital fistula
- HSG- for diagnosis of vesicouterine fistula when patient presents with symptoms of menouria
- Ultrasound, CT,MRI- done for evaluation of complex fistulae

Management of Vaginal fistulas

- Fistulas recognized at the time of delivery should be corrected immediately
- Treatment of postoperative fistulas may be delayed for 2 to 3 months to allow treatment of infection
- Surgical closure of opening via vaginal or abdominal route (when patient's tissues are healthy)
- Fecal or urinary diversion procedure may be required for large fistulas
- Rarely, a fistula may heal without surgical intervention

Treatments of Vaginal Fistula:

Medicines for the treatment of Vaginal Fistula

Antibiotics- Antibiotics are given to a patient of vaginal fistula to reduce the risk of infection and Crohn's disease.

- Infliximab- Inflixmab drugs are given to a patient of vaginal fistula to reduce the inflammation and speed up the recovery process.
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Surgical treatment of Vaginal Fistula

If a patient is not getting any relief from the medicines, a gynaecologic surgeon will perform a surgery to close the opening of fistula tract. Surgical methods include: Tissue grafting

- Colostomy
- Applying patch of biological tissue into the fistula
- Sewing an anal fistula



Vesicovaginal fistula

Symptoms

- Urinary leakage from the vagina within 7-10 days after pelvic surgery
- Presentation may range from watery vaginal discharge to total urinary incontince.

Examination:

- Acute presentation
 - Area of inflamation & erythema in the vagina
- Chronic presentation
 - May be seen as a small opening in the vaginal wall
 - Three Swab test may be usefull in diagnosis of Vesicovaginal fistula

Treatment of Vesicovaginal fistula

- Conservative treatment (waiting for spontaneous rupture) by prolonged catheter is useful in small fistulas.
- Surgical treatment (in most cases): by vaginal or abdominal approach



Rectovaginal Fistula

- A rectovaginal fistula is a communication between the anterior wall of the anal canal or rectum and the posterior wall of the vagina.
- **Rectovaginal fistulas** are classified as low if a perineal approach to repair is possible and high if a repair can be accomplished only transabdominally.



Treatment

• Treatment : Epidural anaesthesia was given with 2% lignocaine hydrochloride. After development of anaesthesia, the fistulous opening was sutured with figure of eight knot sutures. Post-operatively magnesium sulphate plus castor oil enema was given for 5 days. Further, Amoxycillin-Cloxacillin injection a 2 gm IM for 5 days and Ketoprofen al0 ml IM for 3 days were administered.

Colovaginal fistula

• A fistula is an abnormal communication between two epithelialized surfaces. Colovaginal fistulas, although rare, can result in significant emotional, interpersonal and financial consequences. These fistulas occur most commonly in female who have previously undergone total hysterectomy. There is wide agreement that surgical management is the most appropriate treatment of digestive tractvaginal fistulas, with colovaginal fistulas representing the third most common lower reproductive tract fistulas surgically repaired.



Symptoms

symptoms that should raise suspicion for the presence of colovaginal fistula:

- I. The patient reports stool and/or flatus per vagina or persistent foulsmelling vaginal discharge/vaginitis resistant to local or medical treatment
- 2. The patient has previously undergone hysterectomy
- 3. The patient has a history of diverticular disease, with or without a history of diverticulitis (many may not report this diagnosis)

URETERO-VAGINAL FISTULA

Cause:

- Injury to ureter during a gynaecological operation as hysterectomy
- may develop following a difficult labour.
- It leads to incomplete incontinence
 - Urine from affected ureter escapes from vagina while bladder fills up & empties normally from other ureter
- It is always small & high up in vagina lateral to cervix.
- Differentiated from a vesico-vaginal fistula by:
 - by methylene blue test.
 - Cystoscopy shows ureteric efflux on one side only.

Causes of Enterocutaneous Fistulae

Cause	Frequency (%)
 Postoperative 	85
 Spontaneous 	15
 Crohn's disease 	39
 Ulcerative colitis 	13
 Malignancy 	9
 Radiation 	6
 Diverticular disease 	5
Others	27
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