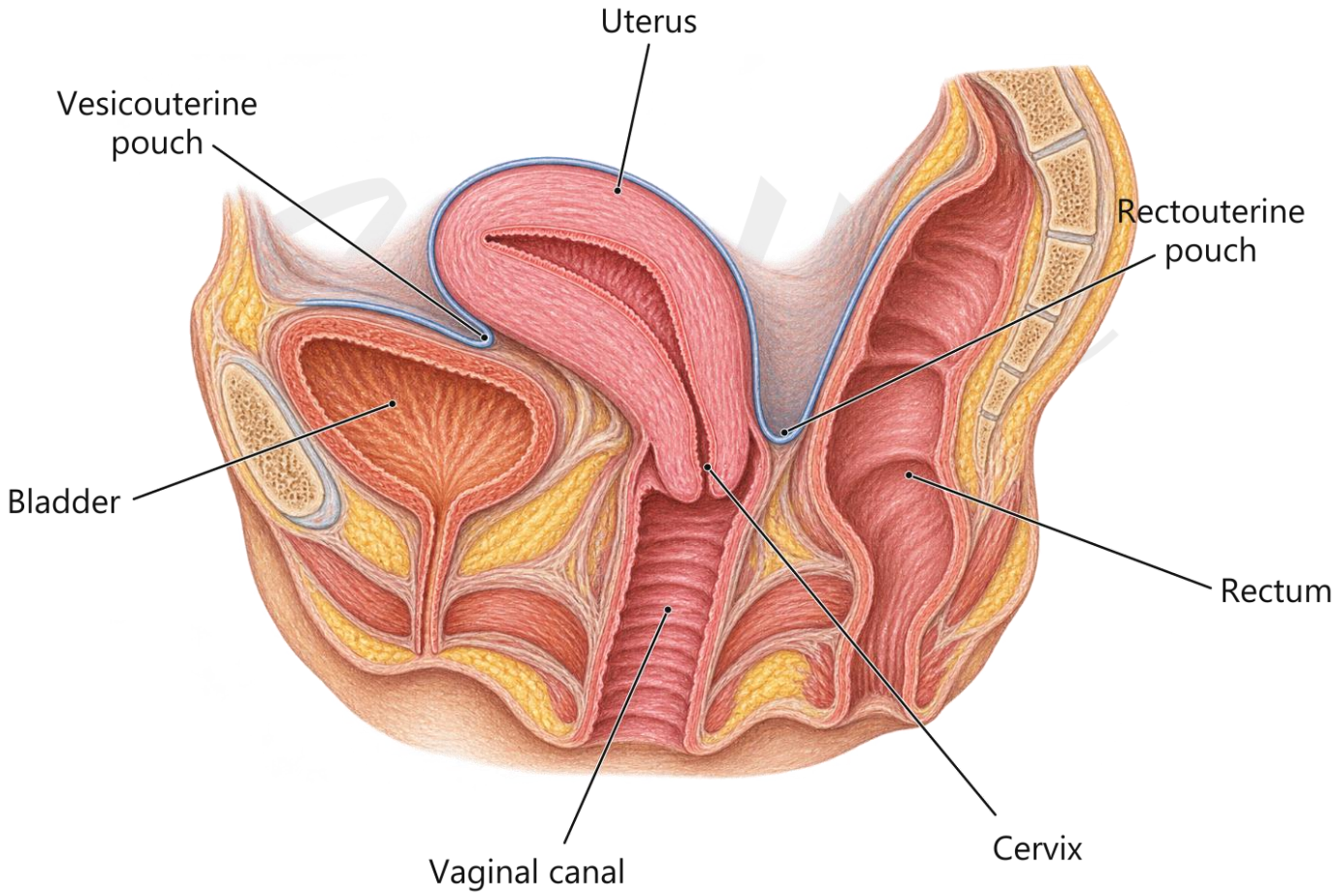
Obstetrics & Gynaecology - Topic 26 - Genital injuries and fistulae

Genital Injuries

Anatomical Involvement and Clinical Importance

- Genital injuries may involve the vulva, vagina, cervix, perineal muscles, anal sphincter, bladder, urethra, ureters or rectum.
- They may occur during childbirth, pelvic surgery, accidental trauma, sexual violence or an unsafe procedure.
- The vagina lies behind the bladder and urethra and in front of the rectum, so a deep injury can involve more than one organ.
- Blood loss may be visible, but a deep vaginal or pelvic haematoma can conceal a substantial amount of bleeding.



Normal pelvic relationships explain why a deep genital injury can involve the bladder anteriorly or rectum posteriorly; no fistula is shown

Aetiological Groups of Genital Injury

1. Obstetric Injuries

- Rapid or difficult birth, instrumental delivery, a large baby and poorly controlled tissue stretching can cause tears.

Copyright by Engacy Learning Private Limited. All rights reserved. Reproduction or distribution without written consent is strictly prohibited.

- A cervical or vaginal tear may cause continuing postpartum bleeding even when the uterus is well contracted.
- Prolonged obstructed labour may compress pelvic tissues until their blood supply fails, causing delayed tissue breakdown and a fistula.

2. Surgical and Non-Obstetric Injuries

- Pelvic surgery can injure the bladder, ureter or bowel, particularly when anatomy is distorted by adhesions, a tumour or previous surgery.
- Straddle injuries, penetrating trauma and sexual violence may produce lacerations or haematomas.
- A foreign body or repeated unsafe instrumentation can cause ulceration, infection or a deeper communication between organs.

Recognition and Initial Care

Look for Immediate Danger

- Assess airway, breathing, circulation, pain, pulse, blood pressure, mental state and the amount of ongoing bleeding.
- Severe perineal pressure, unilateral swelling, difficulty passing urine or shock with little external bleeding suggests a haematoma.
- Abdominal pain, peritonism, haematuria, urine leakage or faecal contamination raises concern for deeper organ injury.
- Call for senior obstetric, gynaecological, surgical or urological help according to the suspected injury.

Stabilise Before Detailed Repair

- Provide appropriate intravenous access, blood tests, cross-matching, fluid and blood-component support when haemorrhage is significant.
- Use direct pressure for an accessible bleeding wound while arranging definitive treatment.
- Provide analgesia, maintain warmth and monitor urine output when catheterisation is safe and indicated.
- Deep or complex injuries need adequate lighting, exposure, anaesthesia and trained repair rather than hurried blind suturing.
- Do not blindly probe a deep wound or clamp tissue when the ureter, bowel or a major vessel may be nearby.

Degrees of Perineal Tears

1. First Degree

- The injury affects perineal skin and/or vaginal mucosa.

2. Second Degree

- Perineal muscles are injured, but the anal sphincter is intact.

Copyright by Engacy Learning Private Limited. All rights reserved. Reproduction or distribution without written consent is strictly prohibited.

3. Third Degree

- Third-degree tears involve the anal sphincter.

A. Grade 3a

- Less than half of the external anal sphincter thickness is torn.

B. Grade 3b

- More than half of the external anal sphincter thickness is torn.

C. Grade 3c

- Both external and internal anal sphincters are torn.

4. Fourth Degree

- The sphincter complex and anorectal mucosa are torn.

Perineal Tear Grades at a Glance

Grade	Structures involved
First degree	The injury affects perineal skin and/or vaginal mucosa.
Second degree	Perineal muscles are injured, but the anal sphincter is intact.
Third degree, 3a	Less than half of the external anal sphincter thickness is torn.
Third degree, 3b	More than half of the external anal sphincter thickness is torn.
Third degree, 3c	Both external and internal anal sphincters are torn.
Fourth degree	The sphincter complex and anorectal mucosa are torn.

Clinical Assessment and Repair

- A rectal buttonhole injury involves the anorectal mucosa while the anal sphincter may remain intact, so it must be actively considered.
- After vaginal birth, systematic inspection and an appropriate rectal examination help identify sphincter and mucosal injury.
- If the extent of a tear is uncertain, obtain an experienced assessment before deciding the grade and repair.
- When uncertainty remains between two sphincter-injury grades, classification and repair should err towards the more extensive injury after senior review.

Copyright by Engacy Learning Private Limited. All rights reserved. Reproduction or distribution without written consent is strictly prohibited.

Principles of Repair and Aftercare

Skilled Layered Repair and Rectal Check

- Third- and fourth-degree tears need repair by a trained clinician, usually in theatre with suitable regional or general anaesthesia.
- Identify and repair the injured layers separately while preserving tissue and avoiding tension.
- A rectal examination after repair checks that sutures have not passed through the rectal mucosa unintentionally.

Medicines, Rehabilitation and Follow-Up

- Appropriate antibiotics, analgesia and a bowel regimen reduce infection, pain and straining after anal sphincter repair.
- Explain wound hygiene, pelvic-floor rehabilitation and symptoms that require review, including increasing pain, fever, wound breakdown or incontinence.
- Follow-up should assess bowel control, urinary symptoms, pain, sexual function and emotional recovery.

Vulval or Vaginal Haematoma

Recognition and Stable Collections

- A haematoma forms when blood collects within tissues after vessel injury, sometimes despite an intact surface.
- A small stable haematoma may be managed with observation, pain relief and repeated assessment by the responsible team.

Indications for Intervention and Imaging

- An enlarging haematoma, uncontrolled pain, urinary obstruction or haemodynamic compromise requires urgent intervention.
- Treatment may involve evacuation and haemostasis or selective embolisation where expertise and facilities are available.
- A concealed high vaginal or retroperitoneal collection may need imaging once the patient is stable enough.

Care After Sexual Violence

Urgent Care, Consent and Objective Documentation

- Provide immediate medical care in a private, respectful and trauma-informed manner, and do not make treatment conditional on a police complaint.
- Explain each examination and sample, obtain the appropriate consent, and document informed refusal without denying treatment.
- Record injuries objectively and preserve evidence according to the local medico-legal protocol and chain-of-custody requirements.

Copyright by Engacy Learning Private Limited. All rights reserved. Reproduction or distribution without written consent is strictly prohibited.

Limits of Findings and Preventive Care

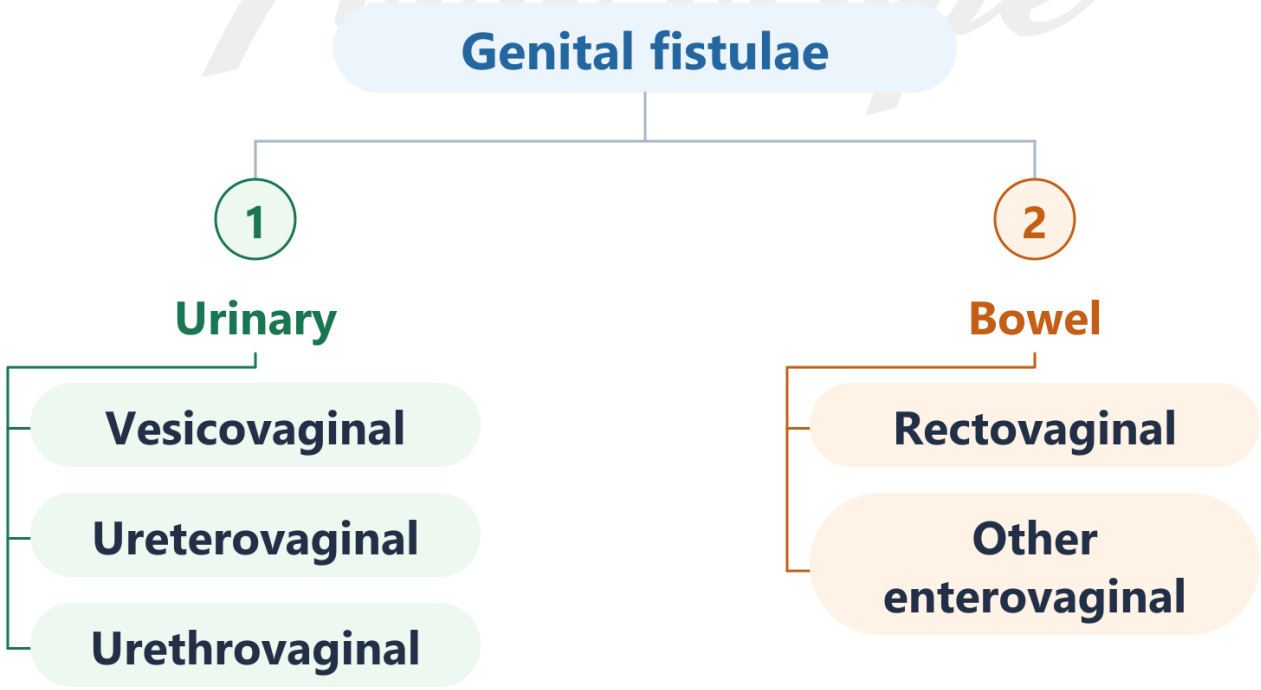
- Absence of an injury does not exclude sexual violence, and an injury cannot establish whether consent was present.
- Do not perform a two-finger test or comment on supposed habituation to intercourse.
- Assess the need for emergency contraception, STI care, hepatitis B prevention, HIV post-exposure prophylaxis and psychosocial support.
- HIV prophylaxis is time-sensitive and should be assessed urgently, ideally immediately and within the recommended seventy-two-hour window.
- Follow applicable reporting and child-protection law while explaining confidentiality and its legal limits.

Genital Fistulae

Definition

- A fistula is an abnormal communication between two epithelial-lined surfaces, allowing fluid or contents to pass by an unintended route.
- A genital fistula commonly connects the urinary tract or bowel to the vagina.

Anatomical Types



1. Vesicovaginal Fistula

- A vesicovaginal fistula connects the bladder to the vagina and commonly causes continuous involuntary urine leakage.
- The volume and timing vary with the size and position of the defect, so not every patient has an identical pattern.

Copyright by Engacy Learning Private Limited. All rights reserved. Reproduction or distribution without written consent is strictly prohibited.

FREE PREVIEW

Click here to visit our website

MBBS PREMIUM NOTES

Complete MBBS notes for every subject and year are available only in the FirstHope app.

Scan or click here

Click here to get the app >

Available on Google Play

Browse MBBS notes by year

firsthope.co.in/mbbs

Click here to explore MBBS >

Scan or click here

FirstHope Medical on Instagram

@firsthope.medical

Click here to follow

App and notes help

Find answers about access and downloads

Click here for help

YEAR 1 / YEAR 2 / YEAR 3 / YEAR 4