Special Article

[Simplified Wound Care/Management - Excerpts from 7th National Wound Care Workshop 2021]

Management of Anorectal Wounds

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Several challenges are associated with the wound care in anal region. Diversion, drainage, and washout are important aspects of management of rectal trauma. Primary survey, orderly evaluation and resuscitation are initial steps in the anal injury care. Colostomy is recommended only in severe anal pathological conditions or bad rectal perforation. Sitz bath without additives is safe and efficacious. In case of non-healing wounds, debride, curate and apply antibiotic ointment.

[*J Indian Med Assoc* 2021; **119(5):** 89-94]

Key words **: Antibiotic, Colostomy, Debride, Sitz bath.**

Anorectal wound is very common, particularly in males than females. Challenges associated with the wound care in anal region include continuous faecal soiling, large amounts of discharge, difficult to dress as anus is left open, cannot apply VAC, dressing required multiple times a day, and patient cannot see the wounds (Fig 1).

To ensure continuous faecal soiling does not happen, anal canal verge reconstruction is done so that the fecal matter spillage is reduced (Fig 2). Wounds are to be kept flat (Fig 3), and skin left open with or without marsupialization.

If wound is away from anus, VAC can be used. Treatment needs to be individualized in patients according to the wound conditions.

Case study — What to do if Road Traffic Accident case comes to you

A case of 20-year male who fell from the scooter on roadside gravel had multiple abrasions over the hip with a large perianal avulsion injury. There were no fractures. First manage ABC of trauma patients.

Editor's Comment :

- Antiseptic solution, non-irritant to eyes can be used for cleaning anorectal wounds and water is the best irrigant. Multiple dressings are recommended to keep wound free from fecal matter.
- Sitz bath safety must be followed such as no additives. In anal trauma, management should be initiated with evaluation of proximal colon.
- Colostomy is recommended only in severe anal pathological conditions or bad rectal perforation where suturing is not possible. If healing rate is <15% per week, then re-assess to rule out any complication. Individuals with Crohn's disease, recurrent anal or rectal cancer, and previous pelvic radiation are at increased risk for wound failure.
- Failure of wound healing despite all the measures, then consider a myocutaneous flap.

Then suggest you should check for depth of wound, the status of the anal sphincter muscles and injuries involving mucosal surfaces.If no major injuries are there, proceed to do a thorough debridement, remove all the dirt, gravel, excise the nonviable tissues, and dothe primary sphincteric repair. Take a few subcutaneous suture, leaving the skin open. Postop wound cleaning can be tone with tap water or saline, let it dry, followed by Hydrogel application. The wound could be covered by petroleum gauze, followed by gamzee. The problems occurs when the surface is large with recurrent soakage of dressings. In such cases, sanitary napkin or adult diapers can be used. In 6 weeks' time the wound healed and patient had full functional control of sphincters.

Causes of Anorectal Wound :

- Iatrogenic injuries, commonest being anal fistula surgery. Open wounds often take 6-8 weeks to heal.

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Received on : 11/05/2021
Accepted on : 12/05/2021

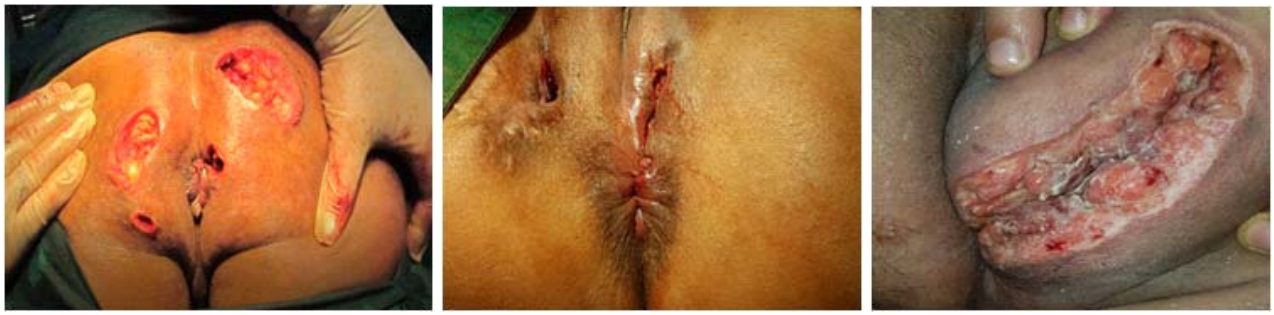


Fig 1 — Challenges in wound care in perineum

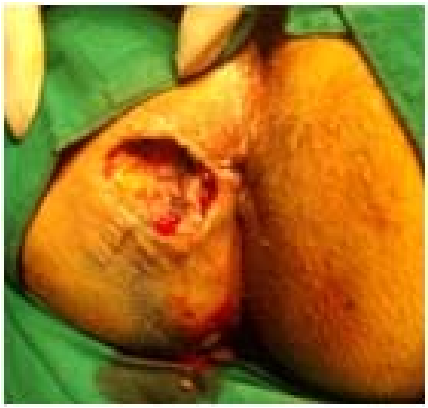


Fig 2 — Anal verge reconstruction redirects the flow of feces.

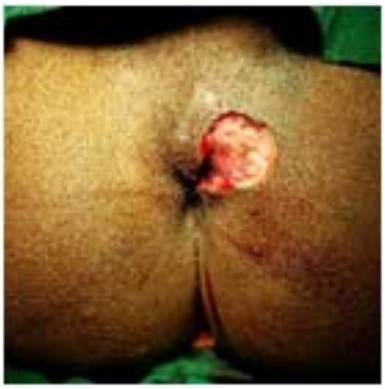


Fig 3 — Flat wounds

- Accidental blunt and all-pervading injuries to the anorectum
- Obstetric anal sphincter injuries (OASIS) are complications that occur during vaginal delivery. Also referred to as third- and fourth-degree perineal lacerations, these injuries involve the anal sphincter complex and, in more severe cases, anal mucosa. In addition to contributing to short-term morbidity, such as wound breakdown and perineal pain, OASIS is a leading risk factor for subsequent loss of bowel control in women

Case Study — A 33-year-old ANC of 39 weeks of gestation presented in casualty in labour. On examination, she was in active stage of labour with cervical dilatation of 7cm at station |+1|, however patient failed to progress over another 2 hours, and with presence of maternal exhaustion with persistent fetal distress, a liberal episiotomy was given and forceps were applied. A 3.5 kg healthy baby was delivered with a third degree perineal tear. What next? How to manage perineal wound?

A woman who has had a forceps delivery has a 44 % incidence of sphincter injury and 14 % incidence of significant fecal incontinence later in life. Women who only delivered vaginally have a 22 percent incidence of sphincter injury and 10 percent incidence of fecal incontinence. Open wounds to be managed with Sitz bath, drainage of collection, debridement when necessary. Cleaning by normal saline or water followed by hydrogel on the wound and cover with sanitary napkin preferably, self-adhesive.[6]

- Sex-related forceful sex, fisting or foreign body insertion injuries.
- Traumatic anal sphincter injury due to penetrating injury (bull horn), blunt trauma, or crush injury.Pelvic gunshot injuries.

Physical Examination :

Examine the wound thoroughly, see for the disruption of skin sphincter muscles, and mucosa (Fig 4) Wound size: from a superficial sinus to a complete dehiscence of the perineal wound.

- Wound discharge: Purulent, serous, or feculent discharge should be noted.
- Foreign body reaction: Foreign material (gravel) and stitch granulomas
- Tissue viability and tissue loss

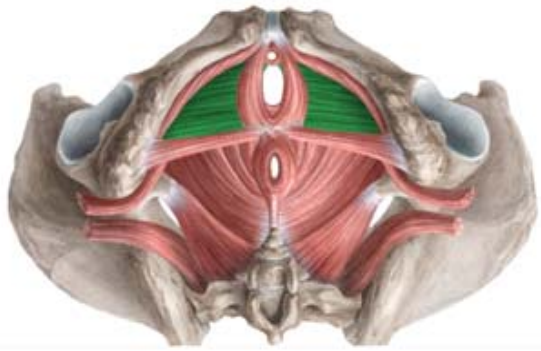


Fig 4 — Important to rule out sphincter injuries

- Ensure all fibrinous exudate is debrided and all nonviable tissue is resected upto healthy tissue[2]

Investigations :

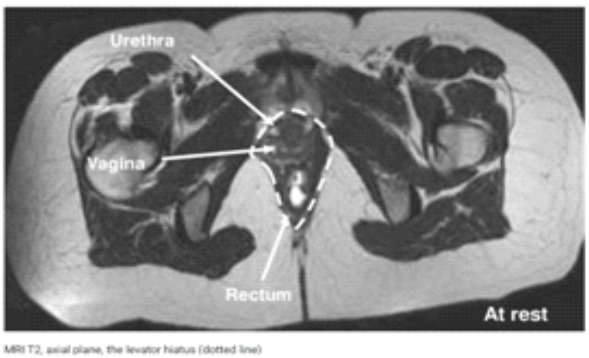
- **Rigid proctoscopy** or **flexible procto-sigmoidoscopy** to rule out rectal injury and to determine the presence and location of injuries.[1]
- Biopsy In Chronic, non-healing wounds, or wounds which are hard, ulcerated, or fungating.

Deeper wounds can be evaluated using imaging techniques such as CT and MRI (Fig 5). To evaluate the sphincter status, undrained collections, foreign bodies, and enterocutaneous fistulas can be detected and defined.[2]

- Examination under Anesthesia is often needed to efficiently explore the wound and debride the necrotic tissue

Management of Anal Injuries — Your Role

- Do a primary survey, orderly evaluation and resuscitation are initial steps in the anal injury care and treat life-threatening conditions first
- Maintenance of the pelvis or treatment of intra-abdominal injuries may require surgical intervention
- Debridement of devitalized tissue is critical to prevent sepsis
- Severe superficial injuries should be managed with frequent dressing changes and prevention of infections which is cumbersome as it involves multiple dressings a day.
- OASIS - Sphincter defect can be managed with overlapping sphincteroplasty (Fig 6) or require sphincter replacement in case of loss of nerve function to the sphincter.



MRI T2, axial plane, the levator hiatus (dotted line)

Fig 5 — Assess perineal trauma by MRI. Levator ring assessment

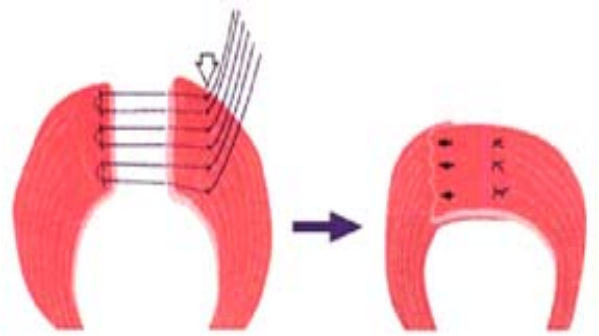


Fig 6 — Overlap Sphincteroplasty

- The incidence of fecal incontinence after sphincter disruption is roughly 30%. The general incidence of fecal incontinence in all women after childbirth is between 3% and 9% in the first postpartum year.[7]

Management of Rectal Injuries :

Traumatic Perineal Injuries lead to complex wounds to perineum may be associated with pelvic fracture. A challenge to the surgeon. Such injuries are the result from of road traffic accidents or bullhorn injuries in India. Prompt management is the need of the hour. Early death may ensue as a result of bleeding and pelvic sepsis. There may be extensive soft tissue injury without bony injury. And colorectal region should be evaluated. A step wise approach to the patient involves

Primary Care Giver :

1. Resuscitation with hemorrhage control
2. Identify and treat of associated injuries.
3. Aggressive initial debridement with pressurized irrigation
4. Daily intraoperative debridement
5. Most RSA are superficial injures, access and take action.

Involve Other Specialists :

1. Colorectal Surgeon : Fecal diversion
2. Urologist : Urinary diversion for complex urologic injuries
3. Orthopaedic : Immediate fracture fixation
4. Nutritionist : Early enteral nutrition
5. Plastic Surgeon : Wound coverage with skin graft early as possible

6. Deep venous thrombosis prophylaxis in view of pelvic injuries

If Colostomy is a must, then do colostomy with distal irrigation. It greatly reduces the incidence of pelvic sepsis. While debriding non- viable tissue, every effort should be made to preserve the anal sphincter mechanism. Debridement of the muscle should be conservative. Sphincter repair when required should ideally be delayed.

Treatment Strategies for Anorectal Wound Complications :

- The initial management of non-septic wound encompasses debridement and dressing changes.
- Controlling all the sources of infection and debriding all necrotic tissue results in almost 89% of wounds to heal within 6 months.
- Negative-pressure vacuum-assisted wound closure can be used for contaminated wounds or in patients who cannot undergo simultaneous flap reconstruction.
- Use of flaps for delayed wound healing are determined by the size and quality of the wound and the patient's ability to medically tolerate additional procedures.
- Kapoor et al. demonstrated that selective use of myocutaneous flaps offers significant improvements in wound complication rates.[3]
- Successful rotational tissue flaps require a healthy patient with a clean wound bed free of sepsis and good granulation tissue.
- Tissue flaps are recommended in patients with delayed closure or unceasing sinuses.

Panel discussed few situations of anorectal wounds. If multiple fistulas are present clean wound everyday with hydroheal, apply gauge sheet and wear diaper. In case of large fistulotomy wounds are present, ensure absence of fecal matter.Wounds can be cleaned with water during bath by using hand shower or saline with 18 number needle or irrigation bottle.If deep wounds are present, the skin should be kept open after curation for which K90 tube can be used to prevent the premature closure.Wounds away from anus can be treated with VAC therapy which is safe and dry dressing or if patient is ambulatory, curate and close it.[4] Panel strictly suggested not to apply steroids, rule out fungal infection, shave the wound if hairy, perform wound culture and use barrier cream to heal.

Sitz Bath :The Ideal Way To Do It :

Sitz bath comprising only lukewarm water is helpful to relieve congestion and edema by improving venous return from the perianal area. Its major effect is thought to be due to the reductions of spasms by relaxing the anal sphincter pressure, reducing anal pain.

Only warm water, assess temperature by back of hand. Higher temperatures lead to burns and blister formation

There should be no additives like povidone iodine, potassium permanganate, chlorhexidine, salt, eusol, Dettol, they are been found to be detrimental to wound healing and results in chemical peeling of skin.

Sitz bath tubs are commercially available for Western commodes, available on amazon, or a simple tub on the floor (Figs 7&8).

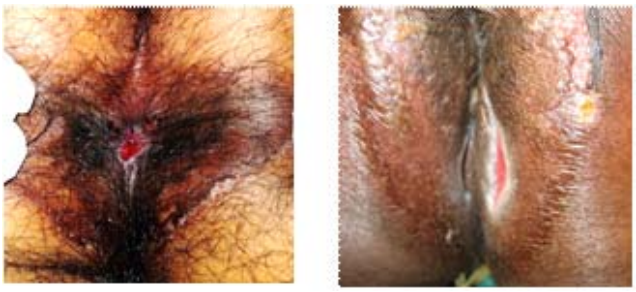


Fig 7 — Chemical peeling of skin povidone iodine (left) and savlon (right)

Fig 8 — Sitz bath tube commercially available

The problem with floor tubs, those with knee problems are unable to take it. Dr B S Singhal from Meerut has indigenously designed a Sitz bath tub for Hospitalized patients (Fig 9).

In case of non-healing wounds, debride, curate, and apply antibiotic ointment. Panel suggested to keep instruments used for anal management separately and label or tape them (Figs 10-12).

Deeper wounds with smaller skin openings tend to close early therefore we need to curette them and insert a tube drain which is not fixed and can be taken out prior each dressing and gradually shortened as the wound heals from below (Fig 13).

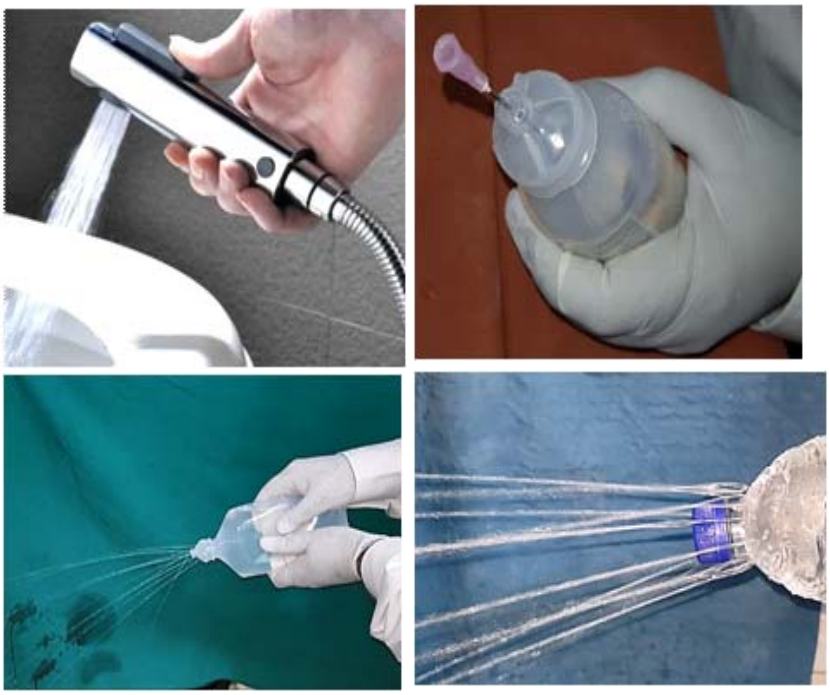


Fig 11 — Regular hand shower, saline (100ml or 500ml) or mineral water bottle can be used to clean the wounds

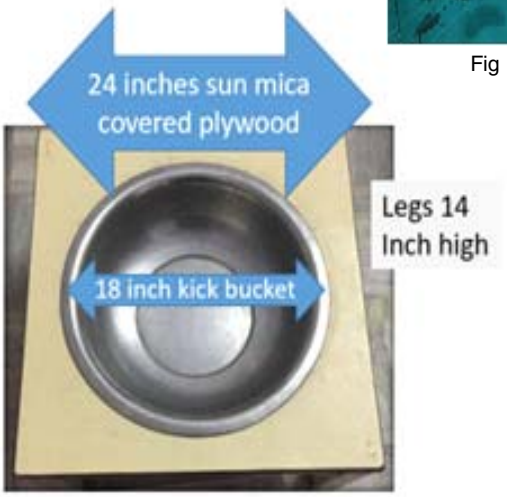


Fig 9 — Modified Sitz Bath Indian bathrooms

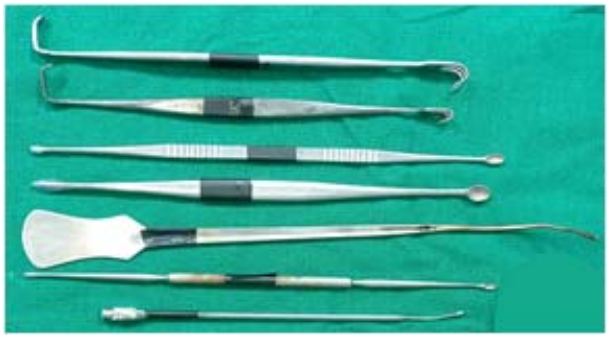


Fig 10 — Instruments used in dressing of anal wounds must be color tapped to keep it away from other dressing instruments

DRESSINGS TO BE DONE AFTER MOTION OR WHEN SOAKED
Flush wound with hand shower, pipe, bottle to keep it fecal matter, slough and discharge free. Sit in warm sitz bath 10 minutes each time
Pad dry the surrounding skin, apply spirit/sterilium solution (alcohol based) And barrier cream such as zinc oxide
Spray colloidal silver solution. Metronidazole ointment 2% can be applied to infected wound
Cover wound with dry sterile guage, Gamgee pad and micropore tape
In initial few weeks, if bleeding/ discharges occur then use guage and gamgee
Sanitary napkin and panty liner can be used and in case of excessive discharge, adult diaper is recommended

Fig 12 — Protocol for dressing anorectal wound

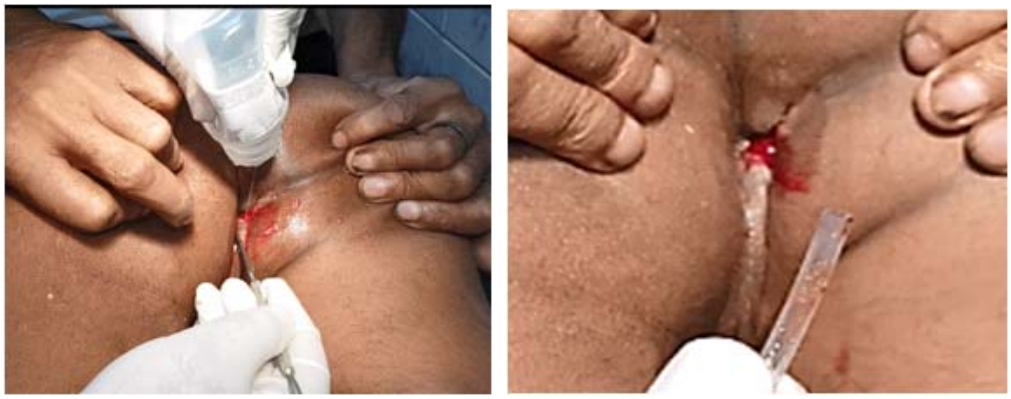


Fig 13 — Left : Patient is prone and retracting their buttocks. Under local anaesthesia the tract is sharp curetted with jet spray of saline bottle with 18 no needle prick; Right : Tube drain for deep narrow wounds, prevents premature closure

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(Answer : Mediquiz 05/2021)

Answer keys :

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