

Pilonidal Sinus Wounds: Etiology and evidence-based management

PRESENTERS:

CONNIE HARRIS
RN ET IIWCC MSC

KAREN LAFORET
MCLSc-WH RN BA
IIWCC

R. GARY SIBBALD
BSc MD
FRCPC (MED)
FRCPC (DERM)

Connie Harris is senior clinical specialist at Wound & Ostomy Care Partners in Waterloo, Ontario, and is also the project lead for the South West Regional Wound Care Framework Project; LHIN 2 and adjunct professor at the School of Physical Therapy at the University of Western Ontario in London, Ontario.

Karen Laforet is the director of nursing at Calea Home Care and adjunct professor at the School of Physical Therapy at the University of Western Ontario in London, Ontario.

R. Gary Sibbald is a professor at the Dalla Lana School of Public Health at the University of Toronto and the president of the World Union of Wound Healing Societies in Toronto, Ontario.

Introduction

During this session, attendees learned about what these experts believe are the leading causes of why pilonidal sinus wounds fail to heal, as well as treatment considerations and evidence-based protocols in the clinic setting.

Etiology of pilonidal sinus disease

Connie Harris began by stating that pilonidal sinus disease occurs most often in young adults – predominantly males between the ages of 18 and 25 years. Table 1 depicts the components of pilonidal sinus and etiology,¹ while Table 2 shows various treatment methods and wound recurrence rates.

Harris, whose MSc thesis on wound healing and tissue repair at Cardiff University examined the evidence regarding healing of these wounds, reported that she thought the most common reason why pilonidal sinus wounds fail to heal is lack of shaving of the affected area in an effective manner. Harris noted that regular shaving will:²⁻⁴

- reduce inflammation from trapping of fecal material and moisture;
- help to visualize retained hairs in ruptured follicles or the wound bed; and
- prevent chronic wound margin inflammation from hairs causing constant irritation to the tissue cells.

Other leading causes of failure to heal include the presence of red friable granulation tissue (which is edematous, bleeds easily and readily pulls apart) and “bridging,” whereby strands of friable hypergranulation tissue mesh together from side to side, or the epithelium bridges without durable stable tissue beneath it. In these cases, application of silver nitrate by a nurse is an optimal treatment in a clinic or home setting, whereas a physician may be able to use a curette or electrodesiccation to debride this tissue.

Pilonidal sinus wounds sometimes fail to heal due to external contamination:

- The dressing does not meet the contours of natal cleft, allowing migration of hairs, clothing debris and feces to enter the wound, and also creating friction.

TABLE 1

Components and etiology of pilonidal sinus¹

Component	Etiology
Body hairs	Enter hair follicles in the natal cleft Cause a foreign-body reaction
Body hair tips/debris	Penetrate the dermis in existing midline pits or site of previous excision
Hair follicle keratin plugs	Folliculitis Subcutaneous abscesses (holes or pits)

- Fluff from underwear contaminates the area.
- Frequent fecal contamination occurs due to the close proximity to the anus.
- Perianal hairs are colonized with *Staphylococcus aureus* (another good reason to shave frequently).
Antimicrobial dressings are indicated if signs of localized infection are present. Secondary dressings (or primary dressings, if no antimicrobial dressing is being used) that fold neatly into the natal cleft should always be used to prevent external contamination. To treat external contamination, the periwound area should be cleansed with chlorhexidine 0.5% or povidone iodine 10%. Harris will be publishing her thesis work in this area in 2012; a literature review has been published online.⁵

Evidence-based protocol in the clinic setting

Harris is currently running a case-study series to collect charts from 50 clients with pilonidal sinus disease who have been treated with her thesis protocol. The Calea clinics in Mississauga, Ontario, are participating in this endeavour, and Karen Laforet spoke to the challenges of rolling out such a protocol in her clinics.

Laforet commented that the psychosocial aspects of pilonidal sinus disease are massive. She said, “It takes a lot of work to develop a relationship with

these patients, and much education needs to be imparted to them...you have to tell them every single time they visit the clinic what they need to be doing to provide care."

She noted that patients should be educated routinely about self-care and should equip themselves with a client care kit that includes the following:

- razor for hair removal;
- hand-held shower to flush out bacteria;
- moist towelettes;
- Spectro Jel/Cetaphil soap substitutes;
- loose pants;
- daytime incontinence briefs or panty liners to hold dressings in place; and
- emergency dressing supplies.

Furthermore, the following client self-care instructions should be imparted:

- Wear loose trousers.
- Refrain from picking up heavy objects for at least the first week following surgery.
- Sit for only short periods.
- Do not drive a motor vehicle for 5–7 days post-surgery.
- Eat foods with good sources of protein and fibre, and drink plenty of fluids, to avoid constipation.
- Post-bowel movement care should take into consideration the following:
 - shower afterwards, if possible;
 - use moist towelettes and non-woven gauze, pat dry; and
 - change the dressing, if soiled.
- Consider stool softeners if taking pain medication that might cause constipation.
- Keep the wound clean and dry.
- Use a hand-held shower sprayer to gently flush out the inside of the wound and direct soap, shampoo and loose hair away from the open area.
- Keep the area dry throughout the day.

TABLE 2

Treatments and recurrence rates for pilonidal sinus wounds

Method	Recurrence rate (%)
Surgical: incision and drainage, curette	40–60
Natal cleft excision with primary closure	37
Healing secondary intention (longer healing time, i.e. 2–6 months)	8–43

Pilonidal sinus disease occurs most often in young adults, predominantly males between the ages of 18 and 25 years.

Treatment options for pilonidal sinus wounds

R. Gary Sibbald addressed treatment options. There are 4 main local wound therapies: iodine, polyhexamethylene biguanide (PHMB), silver and honey.

Iodine

Iodine is a powerful antimicrobial, and provides the best penetration of biofilms. Furthermore, it is easy to apply and has no reported resistance. It should, however, be used with caution in patients with thyroid disease and should not be used on large areas for long periods of time.

PHMB

Topical PHMB (chlorhexidine) is less toxic than other antiseptics. However, it is not water-soluble unless combined with chloride molecules, which can limit diffusion.

Silver

Silver is easy to use as a solution, cream or dressing, and offers a good margin of safety. However, it may induce apoptosis of keratinocytes, and may be inactivated by chloride and proteins.

Honey

Honey is a powerful antimicrobial. It has multiple modes of action and can decrease resistance. However, as it dilutes it can provide a medium for bacterial growth. In addition, it can be odiferous and messy. ☹

References/Références

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