Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL GUIDELINE CLEARINGHOUSE

General

Guideline Title

Practice parameters for the management of pilonidal disease.

Bibliographic Source(s)

Steele SR, Perry WB, Mills S, Buie WD, Standards Practice Task Force of the American Society of Colon and Rectal Surgeons. Practice parameters for the management of pilonidal disease. Dis Colon Rectum. 2013 Sep;56(9):1021-7. [83 references] PubMed

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

The levels of evidence and the grades of recommendations (1A-2C) are defined at the end of the "Major Recommendations" field.

Initial Evaluation

1. A disease-specific history and physical examination should be performed, emphasizing symptoms, risk factors, and the presence of secondary infection. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
   It is important to distinguish pilonidal disease from alternative or concurrent diagnoses such as hidradenitis suppurativa, infected skin furuncles, Crohn's disease, perianal fistula, and infectious processes including tuberculosis, syphilis, and actinomycosis. On examination, the presence of characteristic midline pits in the gluteal cleft in patients with pilonidal disease is almost always visible, sometimes with hair or debris extruding from the openings. It is also important to perform a thorough anorectal examination to evaluate for concomitant fistulous disease, Crohn's disease, or other anorectal pathology. Even though rare, a presacral mass should be ruled out by digital rectal examination.

Treatment

A. Nonoperative Management
   1. In the absence of an abscess, a trial of gluteal cleft shaving may be used for both acute and chronic pilonidal disease as a primary or adjunct treatment measure. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
      Shaving along the intergluteal fold and surrounding region (along with hygiene enforcement and limited lateral incision and drainage of abscesses) has been shown to result in fewer total hospital admission days, fewer total surgical procedures, and earlier return to work in comparison with a variety of more invasive surgical techniques. The most effective frequency and extent of shaving have yet to be clarified. Similar to shaving, successful results have been demonstrated for laser epilation in the setting of both primary and recurrent

pilonidal disease, although there is insufficient evidence to recommend this technique.

2. Fibrin glue and phenol injection might be used in select patients with chronic pilonidal sinus disease. Grade of Recommendation: Weak recommendation based on low-quality evidence, 2C.
   The use of phenol solution involves one or more injections into the sinus tract until filled, with cautious protection of the surrounding normal skin, removal of sinus hairs and debris with forceps, as well as local shaving. Even in the setting of recurrent chronic sinus disease, phenol injection and local depilatory cream application on a weekly basis have shown low subsequent recurrence rates (0%–11%) at extended follow-up.

   Fibrin glue has been used in a variety of manners: after simple curettage of the tracts, in the primary closure bed after excision, and along the original sinus following lateral excision and primary closure. Healing rates of 90% to 100% have been reported.

3. Antibiotics have a limited role in the treatment of either acute or chronic pilonidal disease, although oral or intravenous agents may be considered in patients with significant cellulitis, underlying immunosuppression, or concomitant systemic illness. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
   The utility of antibiotics in topical or systemic formulations remains unclear. Adjunctive use should be considered in the setting of severe cellulitis, underlying immunosuppression, or concomitant systemic illness, despite limited evidence in this specific venue.

B. Operative Management

1. Patients with acute pilonidal disease characterized by the presence of an abscess should be treated with incision and drainage regardless of whether it is a primary or recurring episode. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.
   For a pilonidal abscess with or without associated cellulitis, the mainstay of treatment is adequate surgical drainage. Drainage of the abscess is not necessarily curative of the underlying disease process. Recurrent disease after complete healing occurs in approximately 10% to 15%, with the presence of multiple pits and lateral sinus tracts corresponding to higher recurrence rates.

2. Patients who require surgery for chronic pilonidal disease may undergo excision and primary repair (with consideration for off-midline closure), excision with healing by secondary intention, or excision with marsupialization, based on surgeon and patient preference. Drain use should be individualized. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.
   The surgical treatment of chronic pilonidal disease is generally divided into 2 categories: excision of diseased tissue with primary closure (including various flap techniques) versus excision with a form of healing by secondary intention (including marsupialization).

   Limited and conflicting data are available directly comparing the efficacy of excision with marsupialization to primary closure; primary closure, in general, is associated with improved healing times with higher recurrence. The 1 principle that seems to provide a clear benefit is to close the wound off-midline rather than direct midline when performing primary repair. This has consistently demonstrated faster healing times, lower rates of wound morbidity, and lower recurrence rates.

   When used in conjunction with flap techniques, drains are most commonly associated with a decreased incidence in wound fluid collections, but no difference in wound infections or recurrence rates. Drain use may be considered on a case-by-case basis per surgeon preference.

3. Flap-based procedures may be performed, especially in the setting of complex and multiple-recurrent chronic pilonidal disease when other techniques have failed. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.
   Several flap-based treatment strategies excise the disease while simultaneously providing healthy tissue coverage of the defect. In some settings, soft tissue reconstruction with the intent of altering the contour of the natal cleft as a measure to reduce further disease recurrence has been attempted in both the primary and recurrent states.

   The rhomboid or Limberg flap, in which all sinuses are excised down to the presacral fascia, with rotation of a fasciocutaneous flap that results in flattening of the gluteal cleft, has been used extensively in the treatment of refractory pilonidal disease.

   The Karydakis flap uses a mobilized fasciocutaneous flap secured to the sacrococcygeal fascia with lateral suture lines. Two recent randomized trials have evaluated differences between the Limberg and Karydakis flaps. The 2 flap procedures seem to be relatively equal clinically, but the Karydakis flap had a higher infection rate in 1 study. The Karydakis flap is generally felt to be an easier procedure to learn.

   The cleft-lift technique also creates a flap-based coverage with closure off the midline, obliterating the cleft altogether.

   Several other flaps have been used for pilonidal disease including the V-Y advancement and Z-plasty techniques. Minor wound complications, >90% healing, and low disease recurrence have been reported in case series of patients managed with V-Y

advancement.

C. Management of Recurrent Pilonidal Disease
   1. Operative strategies for recurrent pilonidal disease should distinguish between the presence of an acute abscess (section B1) and chronic disease (section B2), taking into account the experience and expertise of the surgeon. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
      Factors such as the presence of an acute abscess or chronic inflammation, as well as prior treatments (i.e., previous flaps), will help in the decision-making process. Because recurrent presentations may herald a different problem, the surgeon needs to remain vigilant to exclude abnormal underlying causes of chronic perirectal pathology, including inflammatory bowel disease (IBD), immunosuppression, and cutaneous neoplasms.

Definitions:

The Grading of Recommendations Assessment, Development and Evaluation (GRADE) System: Grading Recommendations[a]

	Description	Benefit vs Risk and Burdens	Methodological Quality of Supporting Evidence	Implications
1A	Strong recommendation, High-quality evidence	Benefits clearly outweigh risk and burdens or vice versa	RCTs without important limitations or overwhelming evidence from observational studies	Strong recommendation, can apply to most patients in most circumstances without reservation
1B	Strong recommendation, Moderate-quality evidence	Benefits clearly outweigh risk and burdens or vice versa	RCTs with important limitations (inconsistent results, methodological flaws, indirect, or imprecise) or exceptionally strong evidence from observational studies	Strong recommendation, can apply to most patients in most circumstances without reservation
1C	Strong recommendation, Low- or very-low-quality evidence	Benefits clearly outweigh risk and burdens or vice versa	Observational studies or case series	Strong recommendation but may change when higher quality evidence becomes available
2A	Weak recommendation, High-quality evidence	Benefits closely balanced with risks and burdens	RCTs without important limitations or overwhelming evidence from observational studies	Weak recommendation, best action may differ depending on circumstances or patients' or societal values
2B	Weak recommendations, Moderate-quality evidence	Benefits closely balanced with risks and burdens	RCTs with important limitations (inconsistent results, methodological flaws, indirect or imprecise) or exceptionally strong evidence from observational studies	Weak recommendation, best action may differ depending on circumstances or patients' or societal values
2C	Weak recommendation, Low- or very-low-quality evidence	Uncertainty in the estimates of benefits, risks, and burden; benefits, risk, and burden may be closely balanced	Observational studies or case series	Very weak recommendations; other alternatives may be equally reasonable

RCT = randomized controlled trial.

[a]Adapted from: Guyatt G, Gutterman D, Baumann MH, et al. Grading strength of recommendations and quality of evidence in clinical guidelines: report from an American College of Chest Physicians Task Force. Chest. 2006;129:174–181. Used with permission.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Pilonidal disease

Guideline Category

Evaluation

Management

Treatment

Clinical Specialty

Colon and Rectal Surgery

Gastroenterology

Intended Users

Advanced Practice Nurses

Nurses

Physician Assistants

Physicians

Guideline Objective(s)

To provide information on the evaluation and management of pilonidal disease

Target Population

Adults with pilonidal disease

Interventions and Practices Considered

Evaluation

Disease-specific history and physical examination

Treatment/Management

Nonoperative

1. Trial of gluteal cleft shaving
2. Phenol injection and local depilatory cream application
3. Fibrin glue

4. Antibiotics
    - Perioperative prophylaxis
    - Postoperative treatment
    - Topical use

Operative

1. Incision and drainage
2. Excision and primary repair (with consideration for off-midline closure)
    - Excision of diseased tissue with primary closure (including various flap techniques)
    - Excision with a form of healing by secondary intention (including marsupialization)
3. Drain use
4. Flap-based procedures
    - Rhomboid or Limberg flap
    - Karydakis flap
    - Cleft-lift
    - V-Y advancement
    - Z-plasty

Major Outcomes Considered

- Secondary infection
- Chronic pilonidal disease
- Recurrence rate and abnormal underlying causes
- Wound complications

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

An organized search of MEDLINE, PubMed, EMBASE, and the Cochrane Database of Collected Reviews was performed through December 2011. Key-word combinations included pilonidal disease, pilonidal sinus, pilonidal cyst, pilonidal abscess, recurrence, gluteal cleft, natal cleft, fistula, flap, cleft-lift, and related articles. Directed searches of the embedded references from the primary articles were also performed in selected circumstances. Although not exclusionary, primary authors focused on all English language manuscripts and studies of adults.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

See the "Rating Scheme for the Strength of the Recommendations" field.

Methods Used to Analyze the Evidence

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Recommendations were formulated by the primary authors and reviewed by the entire Standards Committee. The final grade of recommendation was performed by using the Grades of Recommendation, Assessment, Development, and Evaluation (GRADE) system (see the "Rating Scheme for the Strength of Recommendations" field).

Rating Scheme for the Strength of the Recommendations

The Grading of Recommendations Assessment, Development and Evaluation (GRADE) System: Grading Recommendations[a]

	Description	Benefit vs Risk and Burdens	Methodological Quality of Supporting Evidence	Implications
1A	Strong recommendation, High-quality evidence	Benefits clearly outweigh risk and burdens or vice versa	RCTs without important limitations or overwhelming evidence from observational studies	Strong recommendation, can apply to most patients in most circumstances without reservation
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2A	Weak recommendation, High-quality evidence	Benefits closely balanced with risks and burdens	RCTs without important limitations or overwhelming evidence from observational studies	Weak recommendation, best action may differ depending on circumstances or patients' or societal values
2B	Weak recommendations, Moderate-quality evidence	Benefits closely balanced with risks and burdens	RCTs with important limitations (inconsistent results, methodological flaws, indirect or imprecise) or exceptionally strong evidence from observational studies	Weak recommendation, best action may differ depending on circumstances or patients' or societal values
2C	Weak	Uncertainty in the estimates of	Observational studies or case series	Very weak

	Description	Benefit vs Risk and Burdens	Methodological Quality of Supporting Evidence	Implications
	recommendation, Low- or very-low-quality evidence	benefits, risks, and burden: benefits, risk, and burden may be closely balanced		recommendations; other alternatives may be equally reasonable

RCT = randomized controlled trial.

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Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Not stated

Description of Method of Guideline Validation

Not applicable

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate evaluation, treatment and management of pilonidal disease

Potential Harms

- Following simple incision and drainage for first-episode acute pilonidal abscesses, overall successful healing has been reported to be ~60%, whereas the remaining patients required a second definitive procedure to address excess granulation before wound closure. Recurrent disease after complete healing occurs in approximately 10% to 15%, with the presence of multiple pits and lateral sinus tracts corresponding to higher recurrence rates. In 1 report, the overall cure rate at a median follow-up of 60 months was 76%.
- Case series using mostly suction drains for 2 to 6 days following primary closure demonstrated low complication rates (0%–10%), with no morbidity directly attributed to the drain, and >85% rate of healing.
- The rhomboid or Limberg flap is associated with low (0%–6%) overall rates of surgical site infections.
- Minor wound complications and low disease recurrence have been reported in case series of patients managed with V-Y advancement.
- Prospective nonrandomized data reported wound complications in 7% and recurrence in <1% of patients treated with Karydakis flap. Similar findings have been reported in case series by using this technique (<5% recurrence; 9%–21% local complication rate), with additional data demonstrating both smoking and obesity to be predictors of wound complications. In the single randomized, controlled study comparing the Karydakis procedure with open healing, the Karydakis repair resulted in a 6% recurrence rate, 20% wound morbidity, and

98% overall healing rate at a follow-up of 3 years.
- Randomized data on the cleft-lift technique demonstrated recurrence rates of 12%.

Qualifying Statements

Qualifying Statements

- These guidelines are inclusive, and not prescriptive. Their purpose is to provide information on which decisions can be made, rather than dictate a specific form of treatment. These guidelines are intended for the use of all practitioners, health care workers, and patients who desire information about the management of the conditions addressed by the topics covered in these guidelines.
- It should be recognized that these guidelines should not be deemed inclusive of all proper methods of care or exclusive of methods of care reasonably directed to obtaining the same results. The ultimate judgment regarding the propriety of any specific procedure must be made by the physician in light of all the circumstances presented by the individual patient.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Patient Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2013 Sep

Guideline Developer(s)

American Society of Colon and Rectal Surgeons - Medical Specialty Society

Source(s) of Funding

American Society of Colon and Rectal Surgeons

Guideline Committee

Standards Practice Task Force of the American Society of Colon and Rectal Surgeons

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

Not stated

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available in Portable Document Format (PDF) from the American Society of Colon and Rectal Surgeons Web site .

Print copies: Available from the American Society of Colon and Rectal Surgeons, 85 W. Algonquin Road, Suite 550, Arlington Heights, Illinois 60005.

Availability of Companion Documents

None available

Patient Resources

The following is available:

- Pilonidal disease. Patient brochure. Arlington Heights (IL): American Society of Colon & Rectal Surgeons; 2012. Electronic copies:

Available from the American Society of Colon and Rectal Surgeons Web site .

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC Status

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