



**SANDHILLS
CENTER**



Hidradenitis suppurativa surgery

Clinical Policy ID: CCP.1231

Recent review date: 3/2022

Next review date: 7/2023

Policy contains: Hidradenitis suppurativa; Hurley staging system; skin conditions.

This policy is a Sandhills Center Clinical Coverage Policy adopted from AmeriHealth Caritas of North Carolina. These clinical policies are used to assist with making coverage determinations. Sandhills Center's clinical policies are based on guidelines from established industry sources, such as the Centers for Medicare & Medicaid Services (CMS), state regulatory agencies, the American Medical Association (AMA), medical specialty professional societies, and peer-reviewed professional literature. These clinical policies along with other sources, such as plan benefits and state and federal laws and regulatory requirements, including any state- or plan-specific definition of "medically necessary," and the specific facts of the particular situation are considered by Sandhills Center when making coverage determinations. In the event of conflict between this clinical policy and plan benefits and/or state or federal laws and/or regulatory requirements, the plan benefits and/or state and federal laws and/or regulatory requirements shall control. Sandhills Center clinical policies are for informational purposes only and not intended as medical advice or to direct treatment. Physicians and other health care providers are solely responsible for the treatment decisions for their patients. Sandhills Center's clinical policies are reflective of evidence-based medicine at the time of review. As medical science evolves, Sandhills Center will update its clinical policies as necessary. Sandhills Center clinical policies are not guarantees of payment.

Coverage policy

Surgery for hidradenitis suppurativa is clinically proven and, therefore, medically necessary when all of the following criteria are met (Gulliver, 2016; Zouboulis, 2015):

- Member has a confirmed diagnosis of hidradenitis suppurativa from a dermatologist.
- Disease is refractory to antibiotic treatments, acne washes and medicine, and bleach baths of 5 – 10 minutes.
- Disease is refractory to conservative medical therapy, including, but not limited to:
 - Local consistent hygiene practices.
 - Use of antiseptic and antiperspirant agents (e.g., 6.25% aluminum chloride hexahydrate in absolute ethanol).
 - Application of warm compresses with sodium chloride solution or Burow's solution.
 - Cessation of cigarette smoking.
 - Medications: oral and topical antibiotics, anti-inflammatories, antiandrogens and other hormonals, retinoids, biologics, corticosteroids, intralesional triamcinolone, spironolactone, or finasteride.
 - Weight reduction in obese patients.
 - Wearing of loose-fitting clothing.
 - Laser hair removal.

Limitations

No limitations were identified during the writing of this policy.

Alternative covered services

- Primary care services (i.e., patient education).
- Specialty services (i.e., dermatologic service).

Background

Hidradenitis suppurativa is a chronic inflammatory skin disease causing painful, malodorous nodules and abscesses that form scar tissue and sinus tunnels and tracts with a devastating impact on the member's quality of life. It contributes to chronic pain, depression, body image issues, substance use disorders and an increase in suicidal rates as compared to the general public. Locations of the lesions are generally in the axillae and groin fold areas mostly, but can occur in others. A diagnosis is made when the condition occurs at least twice in a six month time frame (Orenstein et al, 2020).

Hidradenitis suppurativa affects up to 4% of the population worldwide (Marvel, 2019). In a study of 47,690 U.S. patients, hidradenitis suppurativa was more than twice as prevalent among females than males (137 versus 58 per 100,000), was about three times more prevalent among African Americans than whites (296 versus 95 per 100,000); and was most prevalent among those in their 30s (172 per 100,000) (Garg, 2017). Medicaid beneficiaries with the condition experience a particularly high co-morbidity burden and expensive and interrupted use of outpatient healthcare resources that may be associated with poorer outcomes (Marvel, 2019).

Onset at the time of puberty has led several authorities to cite hormonal changes (occlusion of the apocrine duct by a keratinous plug, and defects of the follicular epithelium) as an etiologic factor in the development of hidradenitis suppurativa. An estimated 30% to 40% of persons with the disease report a family history. Comorbidities include obesity, diabetes, insulin resistance, glucose tolerance, and hyperlipidemia (Scuderi, 2017).

The oldest, and simplest, system for classification of hidradenitis suppurativa is the Hurley staging system (Scuderi, 2017). Hurley stage I is a single lesion without sinus tract formation. Stage II manifests as more than one lesion or area, but with limited tunneling. Stage III is defined as multiple lesions, with more extensive sinus tracts and scarring.

Hidradenitis suppurativa is difficult to treat owing to its pervasive inflammation with abscesses and inflammatory nodules, which leads to disruption of normal skin and subcutaneous architecture with sinus tract formation and, in severe cases, with extensive scarring (Jovanovic, 2017). In contemporary practice, physicians often use antibiotics, acne washes/medicines, or bleach baths of 5-10 minutes. Numerous other conservative treatments can be used such as topical and/or systemic antibiotics, hormonal interventions, analgesics and, in selected cases, immunosuppressants. Less invasive methods recently becoming more common include vacuum-assisted closure therapy, platelet-enriched plasma, and dermal substitutes.

In refractory situations, a surgical procedure including one of the following may be necessary:

- Incision and drainage, during which the surgeon drains one or two lesions or cuts them out.
- Excision and primary closure (or deroofting) surgery.
- Radical excision, which involves surgically cutting out the hidradenitis suppurativa with a margin of normal-looking skin, and covering the area with a skin graft or a skin flap.

Surgical excision goal is complete eradication of involved skin and subcutaneous tissues, and avert any possibility of malignant change (i.e., squamous carcinoma); however, controversy surrounds the best procedural

approach. Moderately severe axillary lesions can be treated adequately by excision and primary closure. This approach is particularly popular because it allows both axillae to be treated simultaneously in the many patients with bilateral involvement.

In the acute phase; surgical intervention should be limited to incision, drainage, and deroofting of the affected area, and more extensive surgery should be reserved for the silent chronic phase. Reconstruction after radical excision may be indicated to maintain function, reduce contracture deformity, and provide good aesthetic outcomes (Scuderi, 2017).

Findings

Based on the European Dermatology Forum guidelines (Gulliver, 2016) for the management of hidradenitis suppurativa, all patients should be offered adjuvant therapy as needed (pain management, weight loss, tobacco cessation, treatment of super-infections, and application of appropriate dressings). The treating physician should be familiar with disease severity scores, especially Hurley staging. The need for surgical intervention should be assessed in patients with higher Hurley stages of disease.

A European guideline recommends that locally recurring lesions can be treated by classical surgery or laser techniques; for widely spread lesions, medical treatment either as monotherapy or in combination with radical surgery is more appropriate (Zouboulis, 2015).

In a study of 846 persons with hidradenitis suppurativa, 45.5%, 41.5%, and 13.0% were classified as Hurley stage I, II, and III, respectively. Severity was associated with male sex ($P < .001$), disease duration ($P < .001$), body mass index ($P = .01$), smoking pack-years ($P = .001$), and axillary ($P < .001$), perianal ($P < .001$), and mammary lesions ($P = .03$) (Schrader, 2014). These severity risk factors could help identify patients who need close monitoring and who would benefit from early, aggressive therapy.

A 2016 Cochrane review of 12 trials covering 15 treatment modalities for hidradenitis suppurativa found no randomized controlled trials examining the timing of surgery or optimal surgical procedure (Ingram, 2016). A systematic review of various treatments of hidradenitis suppurativa, including excisional surgery, produced only four (of 62) studies that met criteria for strong scientific evidence (Rambhatla, 2012).

In a review of 118 surgical procedures to 57 patients with hidradenitis suppurativa, 44 patients (77.2%) showed good tolerance of the operation and during the postoperative period, compared to only one (1.8%) reporting unsatisfactory tolerance. A total of 51 (89.5%) expressed willingness to undergo additional surgery in the event of lesion recurrence. Complete recovery was observed in 34 (59.7%) and partial recovery in 18 (31.6%), and no improvement in five (8.8%) after two years, leading authors to conclude that surgery is effective and well tolerated (Beniek, 2010).

Recurrence after surgery was the topic of a systematic review and meta-analysis of 22 articles. The percent of cases with a documented recurrence included 13.0% for wide incision, 22.0% for local incision, and 27.0% for deroofting. Subjects in the wide excision group had a much lower recurrence rate using flaps and grafting (8% and 6%), compared to 15% for flaps (Mehdizadeh, 2015).

A retrospective study of 50 procedures on 32 patients with hidradenitis suppurativa indicated that antibiotics and minor surgery such as abscess drainage with proper irrigations during the acute inflammatory phase, followed by stabilizing the patient before wide surgical excision reduced recurrence (only six of 32) and complications (Alharbi, 2012).

An outcomes study of 255 persons with hidradenitis suppurativa included those with surgery ($n = 149$) and those treated with antibiotics/anti-inflammatories ($n = 87$). Surgical patients had a significantly better Sartorius (pain) score ($P = .001$), while the score for non-surgical patients was not significantly better ($P = .58$). The

percent of patients with at least minimally important differences in quality of life scores was also higher in surgical patients (55% versus 28%) (Grimstad, 2019).

An American College of Surgery review of 2011-2016 hidradenitis suppurativa surgical patients (n = 2,594) included 54.2% with incision and drainage, 39.2% with debridement, 1.2% with skin graft, and 5.4% with flap reconstruction. Skin graft and flap reconstruction had the highest complications and longest operation time. Flap reconstructions by plastic surgeons compared to general surgeons had significantly shorter operation times and lower transfusion rates (Ruan, 2018).

In 2021, we removed six references from the policy and added three systematic reviews to the policy (Bouazzi, 2020; Ovadja, 2020; Riddle, 2021). All three systematic reviews compared the recurrence rates for different surgical excision strategies for hidradenitis suppurativa. Heterogeneity, poor-quality reporting, and methodological limitations of the evidence prevented firm conclusions about the relative recurrence rates associated with different surgical techniques that have varying degrees of morbidity. Therefore, the optimal surgical strategy from the research cannot be determined. No policy changes are warranted.

References

On December 14, 2021, we searched PubMed and the databases of the Cochrane Library, the U.K. National Health Services Centre for Reviews and Dissemination, the Agency for Healthcare Research and Quality, and the Centers for Medicare & Medicaid Services. Search terms were "hidradenitis suppurativa" (MeSH), "dermatology," (MeSH) "skin abscess and surgery." We included the best available evidence according to established evidence hierarchies (typically systematic reviews, meta-analyses, and full economic analyses, where available) and professional guidelines based on such evidence and clinical expertise.

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Policy updates

4/2016: initial review date and clinical policy effective date: 7/2016

3/2017: Policy references updated.

2/2018: Policy references updated.

1/2019: Policy references updated.

3/2020: Policy references updated.

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