

Surgical and postsurgical wound care in hidradenitis suppurativa

Marco Manfredini  | Federico Garbarino  | Laura Bigi | Giovanni Pellacani |
Cristina Magnoni

Section of Dermatology, Department of
Surgical, Medical, Dental and Morphological
Sciences With Interest Transplant, Oncological
and Regenerative Medicine, University of
Modena and Reggio Emilia, Modena, Italy

Correspondence

Cristina Magnoni, Section of Dermatology,
Department of Surgical, Medical, Dental
and Morphological Sciences With
Interest Transplant, Oncological and
Regenerative Medicine, University of Modena
and Reggio Emilia, via del Pozzo n.71, Modena
41124, Italy.
Email: magnoni.cristina@gmail.com

Abstract

Hidradenitis suppurativa (HS) is a chronic inflammatory disorder. Several medical treatments, with varying degree of efficacy, have been developed. However, in most cases of advanced (HS), the definitive treatment option is often represented by surgical excisions. Surgical techniques, reconstructive approach, and local wound care should be accurately designed in order to obtain the best result. In this letter, we analyzed the possible surgical treatments and local wound care. A literature review was performed on the various surgical treatments, reconstructive techniques, and local wound care. Surgical treatment is a common therapeutic modality for HS. Different surgical reconstructive techniques and postsurgical wound care approaches are described for the management of HS patients. There were few high-quality evidence-based studies evaluating the surgical management of HS. Many disparate HS severity scores were used in these studies making comparison between them difficult. Nonetheless, research into different surgical approaches and wound care management has increased substantially in the past decade and has given patients more surgical therapeutic strategies. The description of the best combinations and timing of surgery, wound care and medical therapies, will be a matter of future research for the definition of the optimal management of HS patient.

KEYWORDS

hidradenitis suppurativa, surgery, wound care

1 | INTRODUCTION

Multiple treatments have been described for the management of HS patients (Alikhan et al., 2019a; 2019b; Bettoli, Manfredini, Calamo, et al., 2018; Bettoli, Manfredini, Massoli, et al., 2018). Surgical approaches are a quite common therapeutic modality for severe HS, even though postsurgical management is usually more complex with respect to other because of the large areas involved and of the ongoing inflammatory process in the adjacent involved skin areas (Garbarino, Manfredini, Rossi, & Magnoni, 2019).

2 | SURGICAL APPROACHES

The choice of the surgical procedure is strictly dependent on patients' characteristics, body location and disease severity. Incision and drainage are the easiest procedures providing short-term benefits and temporary pain relief. Deroofing implies the removal of the sinus "roof" electrosurgically. Adjunctive therapies, such as cryoinsufflation, laser and light-based therapies, have become more commonly used in the management of HS and are used for specific purposes, such as: targeting the hair follicle, reducing the bacterial load, and for tissue debulking (Alikhan et al., 2019b).

TABLE 1 Reconstructive techniques and postsurgical wound care

Reconstructive techniques	
Secondary intention healing	Secondary intention healing (SIH) is the most elemental form of wound closure and the most basic technique in the reconstructive ladder. This approach may be successful both in narrow wounds produced by derroofing and in larger surgical defects, resulting from wide excision. SIH of large wounds has many advantages, including scars that have considerably smaller dimensions in comparison with the initial defect, lack of donor sites, no flap or graft loss and an acceptable range of motion. Disadvantages include the relatively long healing times, painful dressing changes, need for meticulous wound care, and risk of wound contracture, particularly with large excisions.
Primary suture	Primary suture is mostly done in the "mild" variety of the disease and it is appropriate only in case of minor defects surrounded by lax skin.
Artificial dermis and skin graft	Excision and split-thickness skin graft (STSG) remains the most versatile procedure of choice to close large areas of resection and the result of this procedure is often satisfactory. In general, skin grafts may be complicated by graft healing problems and donor-site morbidity and may result in contractures, noticeable differences of color and texture with the surrounding skin and extensive scarring. Nevertheless, they ensure acceptable functional and aesthetic results, especially in the armpits and buttocks. Recent data shows that the graft of dermal substitutes, using a two-step procedure, can be used for the treatment of severe hidradenitis suppurativa (HS) with good aesthetic and functional results.
Flaps	Flaps ensure the best quality of skin closure and may prevent contractures and bad scarring. Some disadvantages can be identified with respect to skin grafts: The harvesting procedure is more difficult and invasive, in addition flaps are more prone to serious complications like tissue necrosis and hemorrhage. Moreover, local flaps might sometimes carry the same affected skin and lead to local recurrences. Therefore, local or regional flaps can only be used if a wide and adequate excision with safe margins is performed.
Postsurgical wound care	
SIH	The goal of postoperative care in large wounds left for SIH is to maintain a moist and clean wound, achieved with wound dressing changes, hydrotherapy and physical therapy. The daily use antiseptic medications are essential in order to avoid severe infection and postoperative complications.

(Continues)

TABLE 1 (Continued)

Postsurgical wound care	
Primary suture and flap	Local wound care is decisive to heal postsurgical skin defects in patients with HS. The positioning of drainage and the administration of antibiotics are crucial to prevent complications in postsurgical management of flaps.
Artificial dermis and skin graft	The use of negative pressure dressing for both STSG and artificial dermis can be applied immediately after skin or artificial dermis grafting to secure the graft firmly to the wound bed.

Patients with chronic and extensive Hurley stage III disease, may be managed by local or wide excision. In wide excision, an area embracing all lesions is removed with surgical margins designed to reach beyond the clinical borders of disease activity and with complete surgical resection of apocrine glands.

Wide surgical excisions must be carried out with wide lateral margins. The deep margin includes the skin, its appendages, and the subcutaneous tissue that should be removed only until normal-appearing fat remains. The muscular fascia must be reached only in the most severe forms of the disease. Therefore, wide excision should not always be as destructive as the "en bloc deep to the fascia" technique used in managing malignancy. It is advised to adjust the excision to the extent and severity of the disease, as well as to the dynamics of its development (Garbarino et al., 2019).

3 | RECONSTRUCTIVE TECHNIQUES

Multiple reconstructive modalities after surgical excision have been described including primary closure, healing by secondary intent, split-thickness skin graft and flap closure (Alikhan et al., 2019b; Garbarino et al., 2019). Despite this variability, there is no general consensus on the preferred surgical technique (Table 1).

4 | CONCLUSION

Our letter focuses on the complex issue of the surgical and postsurgical management of HS patients. At present, only few cohort studies and case series, with low-grade evidence, are available regarding surgical therapies in HS. The best combinations of therapies, including antibiotics and immunomodulatory therapies, for the phases which occur before, during and after surgery, are still poorly defined (Alikhan et al., 2019b). In addition to the surgical and reconstructive techniques, HS surgical treatment should embrace the postsurgical wound care before and after surgery, in order to decrease the time of hospital stay and to achieve the best functional and aesthetic results. Future studies on large series of patients will define the best management of

HS patients that undergo surgical treatment providing practical suggestions on when and how treatments should be used in order to improve surgical efficacy and decrease the risk of complications.

CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

ORCID

Marco Manfredini  <https://orcid.org/0000-0003-3601-655X>

Federico Garbarino  <https://orcid.org/0000-0002-3958-5718>

REFERENCES

- Alikhan, A., Sayed, C., Alavi, A., Alhusayen, R., Brassard, A., Burkhart, C., ... Poulin, Y. (2019a). North American clinical management guidelines for hidradenitis suppurativa: A publication from the United States and Canadian Hidradenitis Suppurativa Foundations: Part I: Diagnosis, evaluation, and the use of complementary and procedural management. *Journal of the American Academy of Dermatology*, 81(1), 76–90. <https://doi.org/10.1016/j.jaad.2019.02.067>
- Alikhan, A., Sayed, C., Alavi, A., Alhusayen, R., Brassard, A., Burkhart, C., ... Poulin, Y. (2019b). North American clinical management guidelines for hidradenitis suppurativa: A publication from the United States and Canadian Hidradenitis Suppurativa Foundations: Part II: Topical, intralesional, and systemic medical management. *Journal of the American Academy of Dermatology*, 81(1), 91–101. <https://doi.org/10.1016/j.jaad.2019.02.068>
- Bettoli, V., Manfredini, M., Calamo, G., Forconi, R., Bencivelli, D., Mantovani, L., ... Corazza, M. (2018). Long-term adalimumab treatment of hidradenitis suppurativa: Results and practical insights from a real-life experience. *Dermatologic Therapy*, 31(6), e12737. <https://doi.org/10.1111/dth.12737>
- Bettoli, V., Manfredini, M., Massoli, L., Carillo, C., Barozzi, A., Amendolagine, G., ... Corazza, M. (2018). Rates of antibiotic resistance/sensitivity in bacterial cultures of hidradenitis suppurativa patients. *Journal of the European Academy of Dermatology and Venereology*, 33(5), 930–936.
- Garbarino, F., Manfredini, M., Rossi, E., & Magnoni, C. (2019). Two-step surgery in extensive anogenital hidradenitis: What kind of faecal management? *International Wound Journal*, 16(3), 866–867. <https://doi.org/10.1111/iwj.13102>

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