

Topical Therapies

Hendricks A.J., Hsiao J.L. Lowes M.A., Shi V.Y. A Comparison of International Management Guidelines for Hidradenitis Suppurativa. *Dermatology*. 2021; **237**: 81–96

Table 2. Topical and intralesional therapy for HS: guideline recommendations

Modality	Recommendations per guideline								
	British Association of Dermatologists [18]	North American (US and Canadian HS Foundations) [20]	HS ALLIANCE [21]	Canadian Dermatology Association [22]	Canadian consensus group [23]	European HS Foundation [24]	European S1 [25]	Swiss consensus group [26]	Brazilian Society of Dermatology [27]
Resorcinol 15% cream	-	Recommended (may induce contact dermatitis)	-	2 nd line	Resolve/prevent follicular blockage in mild HS	2 nd line	For recurrent lesions in Hurley stage I/II HS BID application during flares	-	Can be useful to shorten mean duration of painful nodule or abscess
Antiseptics	-	Chlorhexidine, benzoyl peroxide zinc pyrithione supported by expert opinion	-	-	-	-	-	Triclosan, ammonium bituminosulfate for all Hurley stages	Advise on adequate local hygiene; no need for soaps with high concentrations of chlorhexidine
Clindamycin 1% solution	Consider in patients with HS	May reduce pustules, carries risk of bacterial resistance	Recommended BID × 3 months in Hurley I/II with localized lesions, especially without deep inflammatory lesions	1 st line tx for mild HS; 1% lotion applied BID × 12 weeks	Use as topical anti-inflammatory agent and to prevent secondary infection ¹	Recommended BID × 3 months as 1 st line tx in Hurley stage I/ mild stage II, especially without deep inflammatory lesions ¹	BID × 3 months in localized Hurley stage I or mild stage II; can be prolonged if clinically indicated ¹	Recommended in Hurley I/II HS to avoid bacterial superinfection and reduce inflammation	Recommended for Hurley stage I or in cases of superficial lesions during exacerbation
Intralesional corticosteroid injections	Consider for individual lesions in the acute phase	Injection of inflamed lesions or short-term control of flares	May be helpful for acute inflammatory nodules in combination with other tx at all Hurley stages	2 nd line	TAC 5–10 mg/mL for rapid reduction of inflammation in acute flares or as rescue therapy adjunctive to systemic tx	2 nd line	TAC 5–10 mg/mL for rapid reduction of inflammation in acute flares and for recalcitrant nodules and sinus tracts	Injection of inflamed nodules in Hurley I/II HS	TAC 5–10 mg/mL for tx of acute inflammation and abscesses, refractory nodules, tunnels

BID, twice daily; HS, hidradenitis suppurativa; TAC, triamcinolone acetonide; tx, treatment; -, not specifically mentioned. ¹ Recommendation based on randomized controlled trial(s) in HS.

Systemic Antibiotics, Other Systemics & Biologics

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Table 3. Systemic therapy for HS: guideline recommendations

Modality	Recommendations per guideline								
	British Association of Dermatologists [18]	North American (US and Canadian HS Foundations) [20]	HS ALLIANCE [21]	Canadian Dermatology Association [22]	Canadian consensus group [23]	European HS Foundation [24]	European S1 [25]	Swiss consensus group [26]	Brazilian Society of Dermatology [27]
Antibiotics									
Tetracyclines	Doxycycline or lymecycline for ≥12 weeks. Consider tx breaks to assess efficacy and decrease risk of antimicrobial resistance	In mild-moderate HS × 12 weeks or as long-term maintenance ¹	Recommended in Hurley I/II × 12 weeks ¹	500 mg BID × 4 months for mild HS (1st line) ¹	500 mg BID ¹	500 mg BID as 1st line tx in moderate HS or widespread Hurley I/II for up to 4 months ¹	500 mg BID × 4 months; can be prolonged if clinically indicated ¹	Doxycycline 50–200 mg daily × 3–6 months in Hurley I/II HS	500 mg BID × 10–12 weeks, 1–2 courses
Clindamycin + rifampicin	Clindamycin 300 mg BID and rifampicin 300 mg BID × 10–12 weeks for patients unresponsive to oral tetracyclines ¹	2nd line for mild-moderate HS, 1st line or adjunct for severe HS ¹	Clindamycin and rifampicin 300 mg each BID × 10 weeks ¹	Clindamycin 300 mg BID + rifampicin 600 mg daily × 10 weeks in moderate HS or mild-moderate HS unresponsive to tetracyclines (1st line) ¹	Clindamycin 300 mg BID + rifampicin 600 mg once daily or 300 mg BID × 10 weeks ¹	Clindamycin 300 mg BID + rifampicin 600 mg once daily or 300 mg BID × 10 weeks as 1 st line tx for moderate PGA ¹	Clindamycin 300 mg BID + rifampicin 600 mg once daily or 300 mg BID × 10 weeks ¹	Clindamycin and rifampicin each 300 mg BID × 3 months	Clindamycin 300 mg BID + rifampicin 600 mg daily × 10 weeks
Metronidazole/moxifloxacin/rifampin	–	2nd/3rd line in moderate-severe HS	Rifampicin 10 mg/kg once daily + moxifloxacin 400 mg once daily + metronidazole 500 mg TID (× 6 weeks only) may have efficacy in Hurley I/II patients	–	–	–	Effective in tx-resistant Hurley stage I/III HS at 12 weeks	–	–
Dapsone	Consider in HS unresponsive to abx therapies	May be effective for minority of Hurley I/II patients as long-term maintenance	Evidence from single study	3rd line	Efficacy in HS reported in case reports	3rd line	Reserve for patients with mild-moderate HS when standard 1st and 2nd line agents fail	50–150 mg daily in refractory Hurley II/III disease	May be considered after failure of 1st or 2nd line abx
Ertapenem	–	For severe disease as one-time rescue, bridge to surgery or maintenance tx	IV ertapenem 1 g/day in selected patients with severe HS × 6 weeks	–	–	–	–	–	–
Supplements									
Zinc	Insufficient evidence	–	Combination tx of oral zinc gluconate 30 mg TID + topical triclosan 2% in Hurley I/II	Zinc gluconate as 2nd line tx	Zinc sulfate recommended as adjunct therapy	Zinc gluconate as 2nd line tx	Zinc gluconate initiated at 90 mg/day as maintenance tx in Hurley I/II	Zinc gluconate 30 mg TID as adjunct to abx in Hurley I/II HS	30mg TID as maintenance tx in Hurley stage I/II HS Long-term use limited by zinc-induced impairment of iron and copper absorption
Retinoids									
Acitretin	0.3–0.5 mg/kg daily in men and nonfertile women unresponsive to abx	Consider as 2nd/3rd line tx; contraindicated in women of reproductive potential	3rd line tx for mild-moderate HS	2nd line	0.25–0.88 mg/kg daily can be initiated in early HS stages, may be used in chronic stages with sinus tracts and scarring	2nd line	Can be initiated in early HS stages, may be used in chronic stages with sinus tracts and scarring Dosing ranges from 0.25 to 0.88 mg/kg daily × 3–12 months	0.2–0.5 mg/kg daily in Hurley II/III HS refractory to abx	Preferred over isotretinoin due to higher response rates, but not appropriate in women of childbearing age
Isotretinoin	Do not offer unless concomitant moderate-severe acneiform lesions of face or trunk	Consider only as 2nd/3rd line tx or in patients with severe concomitant acne	–	3rd line	Not proven effective in HS even with concomitant acne	3rd line	Not recommended for use in tx of HS	–	Use of isotretinoin over acitretin justified in women of childbearing age
Biologics									
Adalimumab (anti-TNF-α)	40 mg SC weekly for patients ≥12 years old with moderate-severe HS unresponsive to conventional systemic tx ¹	Recommended at 40 mg SC weekly to improve HS severity and QoL in moderate-severe HS ¹	First choice biologic in moderate-severe HS after failure of conventional tx ¹	160 mg SC week 0, 80 mg week 2, then 40 mg weekly for moderate-severe HS unresponsive to abx (1st line) ¹	40 mg SC weekly for patients with moderate-severe HS ¹	160 mg SC week 0, 80 mg week 2, then 40 mg weekly as 1st line tx for moderate-severe HS ¹ Consider other tx modalities if HISCRC not achieved by 16 weeks	40 mg SC weekly for moderate-severe HS ¹	160 mg SC week 0, 80 mg week 2, then 40 mg weekly for Hurley II/III HS refractory to abx	160 mg SC week 0, 80 mg week 2, then 40 mg weekly ¹ Once inflammation controlled, consider excision of residual active areas or scarring
Infliximab (anti-TNF-α)	Consider at 5 mg/kg q8 weeks in moderate-severe HS unresponsive to adalimumab	Recommended for moderate-severe HS Dose ranging studies needed to determine optimal dosage	Consider as 2nd line biologic for moderate-severe HS	2nd line ¹	No significant difference vs. placebo in HISCRC ¹	5 mg/kg IV at weeks 0, 2, 6 and q2 months thereafter × 12 weeks as 2nd line in moderate-severe HS unresponsive to adalimumab	5 mg/kg IV at weeks 0, 2, 6, then q2 months ¹	–	5 mg/kg IV at weeks 0, 2, 6, then q2 months ¹

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Table 3 (continued)

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Anakinra (anti-IL-1)	Insufficient evidence	100 mg daily may be effective; dose ranging studies needed to determine optimal dosage	Consider as 3rd line biologic for moderate-severe HS	–	–	Significant improvement – in disease severity score and HISCR ¹	–	–	Not available in Brazil	
Canakinumab (anti-IL-1β)	–	–	–	–	–	–	–	–	Used successfully in sparse care reports	
Ustekinumab (anti-IL-12/23)	Insufficient evidence	45–90 mg q12 weeks may be effective; dose ranging studies needed to determine optimal dosage	Potentially effective tx for moderate-severe HS	–	–	–	Three 45 mg SC injections at 0, 4, and 16 weeks with cumulative 33% response rate in 3-patient case series	–	45–90 mg SC q12 weeks; higher dose may be needed for HS tx	
Secukinumab (anti-IL-17A)	–	–	–	–	–	–	–	–	Success in a case of severe tx-refractory HS	
Etanercept (anti-TNF-α)	Do not offer ¹	Limited evidence does not support use in HS management ¹	Not effective ¹	–	–	No significant difference vs. placebo ¹	–	No significant difference vs. placebo ¹	Variable data on efficacy in HS; unable to draw conclusions about its potential utility	
<i>Immunosuppressive agents</i>										
<i>Systemic corticosteroids</i>										
	–	Short-term steroid pulse can be considered for acute flares or bridge to other tx. Long term: taper to lowest possible dose in severe HS	Low-dose prednisolone 10 mg/day (or equivalent) may be effective adjunct tx in recalcitrant HS. Use with caution long term	2nd line	–	–	2nd line	Recommend dose of 0.5–0.7 mg/kg oral prednisolone for short-term use in acute flares, taper over following weeks	Prednisolone 0.5–0.7 mg/kg daily in refractory disease	Short course may be indicated for tx of flares
Cyclosporine	–	–	–	–	–	Efficacy in HS reported in case reports	3rd line	Reserved for cases unresponsive to standard 1st, 2 nd , or 3rd line tx. Reported dosing in HS varies from 2 to 6 mg/kg for 6 weeks to 7 months	2–6 mg/kg daily in refractory disease	Data not robust; consider only as 3rd line option for long-term control of inflammation
<i>Hormonal agents</i>										
<i>Metformin</i>										
	Consider in HS patients with concomitant DM, PCOS or pregnancy	Consider metformin 500 mg BID-TID in appropriate female patients as monotherapy for mild-moderate or as adjunctive tx in severe HS	–	–	–	May be beneficial in patients with HS and PCOS	–	–	500–1,500 mg daily in refractory disease	May consider in women of childbearing age who have failed systemic abx
Cyproterone acetate + ethinyl estradiol	Insufficient evidence	Consider in appropriate female patients as monotherapy for mild-moderate or as adjunctive tx in severe HS ¹	–	–	–	~1/2 of patients exhibited clearance. No significant difference in PaGA between cyproterone acetate + ethinyl estradiol vs. ethinyl estradiol + norgestrel at 6 months ¹	3rd line	100 mg cyproterone acetate daily for female patients with menstrual abnormalities, signs of hyperandrogenism, or high levels of DHEA, androstenedione or SHBP	–	May consider in women of childbearing age for whom systemic abx has failed
Finasteride	Insufficient evidence	Consider 1.25–5 mg/day in appropriate female patients as monotherapy for mild-moderate or as adjunctive tx in severe HS	–	–	–	–	–	–	–	1–5 mg/day in children <12 years old with HS refractory to topical/oral abx
Spirolonactone	Insufficient evidence	Consider spironolactone 100–150 mg daily as monotherapy in women with mild-moderate HS or as adjunctive tx in severe HS	–	–	–	–	–	–	–	Consider in female HS patients for whom systemic abx has failed

Abx, antibiotics; BID, twice daily; DHEA, dehydroepiandrosterone; DLQI, Dermatology Life Quality Index; DM, diabetes mellitus; HS, hidradenitis suppurativa; IV, intravenous; PGA, Physician's Global Assessment; PaGA, Participant's Global Assessment; PCOS, polycystic ovary syndrome; QoL, quality of life; SC, subcutaneously; SHBP, sex hormone-binding protein; TID, three times daily; tx, treatment; –, not specifically mentioned. ¹ Recommendation based on randomized controlled trial(s) in HS.

Procedural Interventions

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Table 4. Laser, Phototherapy and surgical approaches for HS: guideline recommendations

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<i>Light-based therapy</i>									
Photodynamic therapy	Insufficient evidence	Variable success based on small, uncontrolled studies	–	–	Cited	–	Variable success reported with PDT Additional studies needed to establish role of PDT in HS tx	–	–
Intense pulsed light	Insufficient evidence	Supported by case reports	–	–	Cited	Significant improvement maintained at 12 months	Additional studies needed to establish role of IPL in HS tx	–	Option for laser hair removal as adjuvant tx to reduce flares and appearance of new lesions Can provide favorable results even in Hurley II/III disease
<i>Lasers</i>									
Nd:YAG laser	Insufficient evidence	Recommended in Hurley II/III disease ¹ Recommended in Hurley stage I HS based on expert consensus	–	–	Cited	Significant improvement in HS-LASI at 3 months at sites treated with Nd:YAG monthly + topical antimicrobials vs. topical antimicrobials alone ¹	Significant improvement at sites treated with Nd:YAG monthly + topical antimicrobials vs. topical antimicrobials alone ¹ Additional studies needed to establish Nd:YAG as standard HS tx	–	Option for laser hair removal or treatment of superficial lesions
CO ₂ ablative laser –	–	Appropriate for extensive chronic lesions in Hurley II/II HS	Effective alternative to electrosurgical or cold steel techniques	Consider for Hurley stage II/III disease	Cited	Recurrence rate in treated areas ranging from 1.1 to 29%	Can be used for excision and marsupialization of skin areas with less bleeding and better visualization than in standard excisions	Consider in widespread or severe HS	Consider for targeted vaporization and excision of lesions separated by healthy tissue
<i>Procedural and surgical interventions</i>									
Incision and drainage	–	Recommended only for acute abscesses to relieve pain	May be performed in acute situations for tense/painful abscesses; recurrence nearly inevitable	–	May be performed in patients with mild HS	–	–	–	Performed on acute lesions for symptomatic relief
Deroofing or limited excision	–	Recommended for recurrent nodules and tunnels	May be used for solitary lesions, recurrent lesions at fixed locations, or fistula formation in limited areas	Consider for Hurley stage II/III disease	Can be attempted in early/mild disease	17% lesion recurrence rate after deroofing	Effective and fast surgical technique that can be performed in-office	Recommended only in localized, well-circumscribed Hurley I/II HS	For localized disease
Wide local excision	To minimize recurrence when conventional systemic tx have failed	Appropriate for extensive chronic lesions Post-surgical healing by secondary intention, primary closure, delayed primary closure, flaps, grafts, and/or skin substitutes	Perform in Hurley stage III HS to prevent further recurrence	Consider for Hurley stage II/III disease	Only potentially curative tx for severe HS	Accepted therapeutic modality	Treatment of choice for HS with healing by secondary intention, primary closure, grafts, or flaps according to size/location of defect	Consider in widespread or severe HS Recommend healing by secondary intention ± partial closure- negative pressure-assisted healing	In chronic cases of moderate-severe HS Recommend healing by secondary intention > primary closure > grafts > flaps

CO₂, carbon dioxide; f/u, follow-up; HS, hidradenitis suppurativa; HS-LASI, HS Lesion, Area and Severity Index; IPL, intense pulsed light; Nd:YAG, neodymium-doped yttrium aluminum garnet; PDT, photodynamic therapy; tx, treatment; WLE, wide local excision; –, not specifically mentioned. ¹ Recommendation based on randomized controlled trial(s) in HS.