Clinical Pearls for Managing Hidradenitis Suppurativa Patients of Low Socioeconomic Status

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Introduction

Hidradenitis suppurativa (HS) is a debilitating disease presenting as painful nodules and draining sinus tracts in intertriginous areas [1]. Recent studies have demonstrated that patients with HS are more likely to be of low socioeconomic status (LSES); a 2016 multicenter study reported that HS patients have a significantly lower SES status compared to control patients [2] and a 2018 US population-based study found that HS patients are 1.85 times more likely to be of LSES [3].

SES is multidimensional and includes such factors as income, education, and occupation [4]. Identifying patients with LSES in the clinical setting may include unemployment status or disability, education below a college degree, and qualification for certain government welfare programs. In the USA, LSES is a major contributor to health disparities and is consistently associated with poorer health and quality of life outcomes [5, 6]. Indicators of SES track closely with race. In 2017, the median income in the USA was USD 65,273 for whites, which was 22.7 and 38.3% lower for Hispanics and African-Americans, respectively [7]. Whites (32.8%) attained a bachelor's degree or more at a higher rate than African-American

icans (22.5%) and Hispanics (15.5%) [8]. The incidence of HS among African-Americans is >2.5 times higher than for whites [9]. Given that LSES and skin of color are both more common in the HS population, it is important to consider how they impact HS care and outcomes. Additionally, tobacco exposure is common among individuals with LSES and is strongly associated with HS, with current smoking status among patients ranging from 41 to as high as 90% [10]. The average age of HS onset is in the early 20s [10] and in certain countries like the USA, young patients may encounter health insurance issues as they become ineligible for parental insurance (age 26 in the USA).

The directional relationship of LSES with HS has not been established. Physical and mental morbidity associated with HS can hinder patients from maintaining employment, thus negatively impacting their SES [11]. HS patients with LSES also face barriers to accessing health care which can result in diagnostic delay and inadequate management of their disease. There is a paucity of published literature on practical strategies to care for this vulnerable group. We aim to provide clinicians with recommendations for more comprehensive, patient-centered care of LSES HS patients (Table 1).

Table 1. Summary of pearls and recommendations

Pearl	Issues	Practical recommendations	US-specific recommendations ¹
Understand the practical impact of SES	Transportation Child care Insurance coverage Work flexibility	Connect patients to free or low-cost transportation options Enlist aid of social workers to provide patients with community resources such as free clinics, prescription assistance programs, and career pathway programs	Patients may contact Medicaid to determine eligibility for partial reimbursement for medical appointment travel costs
Address lifestyle challenges	Obesity Healthy food cost Social support Clothing cost and comfort	Provide low-cost recipe options through the USDA's SNAP website: https://snaped.fns.usda.gov/nutrition-education/recipes (accessed August 24, 2019) Make nutrition education materials available in the office; free printable materials are available at: https://www.nutrition.gov/basic-nutrition/printable-materials-and-handouts (accessed August 24, 2019) Recommend that patients join free HS support groups such as HOPE for HS, HS Warriors, International Association of HS network Advise loose-fitting clothing in affordable and breathable fabrics such as 100% cotton, rayon, and bamboo	Walmart, Target, Amazon, Dollar Tree, and other US retailers have clothing and sports bra options under USD 10
Mitigate barriers to diagnosis and treatment	Delay in diagnosis Medication costs Wound care cost	Educate other specialties (such as primary care, emergency medicine) and mid-level providers on the signs and symptoms of HS through local conferences, grand rounds, and webinars Establish store and forward teledermatology within health systems to improve access to clinical diagnosis and management Decrease the cost of wound care supplies by advising buying in bulk, at the dollar store, or from major online retailers	Provide information on GoodRx and USD 4/month or USD 10/90-day supply prescription programs (Target and Walmart) to alleviate the financial burden of buying medications; other USD 4 discount drug programs are available at: https://www.needymeds.org/ (accessed August 24, 2019)
Connect patients to mental health services	Inadequate mental health access Fear and stigma	Provide resources for local free or sliding-scale mental health clinics Inform patients about available peer support resources	Provide information regarding "warmline" mental health listening services; a location-based directory can be found at: www.warmline.org (accessed August 24, 2019)
Building a physician-patient relationship	Perception of lower quality care Health literacy	Simplify medical information and check for understanding Engage patients in shared decision making and include family members or caregivers where appropriate	
Prevent use of high cost care settings	Utilization of emergency services	Collaborate with the patient to create a stepwise action plan with clear instructions on coping with flares Leave flexibility in the scheduling template to see HS patients needing urgent care	

HS, hidradenitis suppurativa; SES, socioeconomic status. ¹ Other countries may have similar resources.

Understand the Practical Impact of SES

Like many people of LSES, HS patients face logistical challenges to attending outpatient appointments, including lack of transportation, alternative child care options, and work flexibility [12]. Certain health care plans may allow for partial reimbursement for medical appointment travel costs. Free or low-cost transportation options may also be available in certain hospital and county health systems.

Lack of stable financial resources may still render co-payments, medications, and wound care supplies unaffordable. Furthermore, the physical disability caused by HS contributes to limited mobility, missed work, and failure to attend medical appointments [13]. Enlisting the aid of social workers can help connect patients with community resources, including free clinics, prescription assistance programs, and career pathway programs.

Address Lifestyle Challenges

HS patients have been found to be 17 times more likely to be obese compared to controls [14], and obesity may play a role in disease severity [15, 16]. The immediate surrounding environment of LSES patients can contribute to weight status [17]. Neighborhoods may be less walkable due to poor infrastructure or safety concerns, and have an abundance of convenience stores and fast food establishments instead of grocery stores with fresh produce [18–20]. Budget strain in low-income families can limit their ability to purchase healthier food options [21]. The recipe finder on the USDA's Supplemental Nutrition Assistant Program (SNAP) website serves as a useful resource for low-cost nutritious options. Culturally appropriate nutritional education materials and information about local food banks and community gardens can be made available in outpatient offices. Since group physical activity and dietary management foster social support and accountability [22], HS support groups can serve as an additional venue for facilitating lifestyle interventions. Free HS support groups such as HOPE for HS, HS Warriors, and the International Association of HS Network are available. Family-centered behavioral weight loss interventions show promise in certain primary care populations [23]. Clinicians may consider inviting the patient to bring family members to a follow-up visit in order to recruit them to join the behavioral change effort and ultimately make the home environment more conducive to weight loss.

Friction from tight clothing, elastic bands, and bra straps can irritate HS lesions [24], and clothes may frequently be soiled from drainage from HS lesions [25]. Patients with LSES may have limited resources to purchase new clothing; however, they can be counseled to buy certain affordable fabrics. Clothing that is 100% cotton is easily accessible and reasonably priced. Rayon and bamboo fabrics are soft, absorbent, and an even more affordable option than cotton [26]. For women, sports bras can be purchased in place of underwire bras to reduce irritation to the inframammary area. Budget retailers and discount stores frequently offer clothing and sports bra options under USD 10. Coupons and promotional codes are available online and through mailing lists and can provide additional discounts.

Mitigate Barriers to Diagnosis and Treatment

In a recent multinational study, HS patients reported experiencing an average 10-year delay in diagnosis and on average have visited a physician at least five times before receiving the correct diagnosis [11]. Low income urban and rural populations have limited access to dermatologists. To reduce diagnostic delay, dermatologists can partner with providers at local primary care offices, free clinics, urgent care clinics, and emergency rooms to educate them on the signs and symptoms of HS through venues such as local conferences, grand rounds, or webinars. Since HS is a clinical diagnosis, the use of store and forward teledermatology for diagnosis and basic management is another consideration, especially for underserved areas. HIPAA-compliant patient platforms can encourage patients to contact providers and share photos.

Medication costs pose an additional challenge for HS patients with LSES. Patient assistance programs and resources can offer discounts from various pharmacies. Patients can also ask about member-only savings plans at retail pharmacies. For US patients, major retail pharmacies such as Target and Walmart offer USD 4/30-day or USD 10/90-day supply programs that include commonly prescribed HS medications such as antibiotics and oral contraceptives (Table 2). A 90-day supply with adequate refills can be prescribed to reduce cost from monthly medication co-payments.

Specialty wound care products are often cost prohibitive and not covered by insurance. Alternative affordable dressings include sanitary napkins, adult diapers, and gauze [27]. Compared to silver-impregnated foam dressings, these items are readily accessible through online re-

Table 2. Prices of medications in the USA (accessed August 24, 2019)

	Target			Walmart			
	USD 4 30-day QTY	USD 10 90-day QTY	USD 9 30-day QTY	USD 4 30-day QTY	USD 10 30-day QTY	USD 9 30-day QTY	USD 24 90-day QTY
Cephalexin 500 mg	30	90	–	–	–	–	–
Doxycycline 50 mg	30	90	–	–	–	–	–
Doxycycline 100 mg	20	60	–	–	–	–	–
Metformin 500/850/1,000 mg	60	180	–	60	180	–	–
Smz/Tmp 400/80 mg	28	84	–	–	–	–	–
Smz/Tmp 800/160 mg	20	60	–	–	–	–	–
Spironolactone 25 mg	30	90	–	–	–	–	–
Norgestimate and ethinyl estradiol 28 tab	–	–	28	–	–	28	84
Norgestimate and ethinyl estradiol – triphasic regimen 28 tab	–	–	28	–	–	28	84
Finasteride 5 mg	–	–	30	–	–	–	–

QTY, quantity of pills dispensed; tab, tablets; Smz/Tmp, sulfamethoxazole/trimethoprim.

tail stores or at local dollar stores [27]. Purchasing in bulk and opting for store brands further reduce cost. Wearing moisture wicking mid-thigh biker shorts over dressings in the groin and buttock region can aid in securing the dressings and reduce groin friction and irritation [26]. Moisture wicking fabric with silver such as InterDry™ is useful and can be cut to size to fit under breasts, and in the groin and axillae per manufacturer instructions.

Connect Patients to Mental Health Services

HS patients have been found to have high rates of depression and anxiety (16.9 and 4.9%, respectively) and an increased risk of completed suicide (hazard ratio 2.42; CI 1.07–5.45) [28, 29]. LSES patients are more likely to have inadequate access to mental health care with fewer available community-based mental health services [30]. Even after controlling for SES, African-Americans seek mental health care at a lower rate due to mistrust in the medical system and fear of stigma [31]. Hispanics also utilize mental health care services at a significantly lower rate than whites (8.3 vs. 19.2%, respectively) [32]. Thus, connecting LSES skin of color HS patients to appropriate mental health services is a priority.

Addressing emotional well-being when interacting with LSES HS patients is key. Information regarding local free or income sliding-scale mental health clinics can be

made readily available in the office. After-visit summaries may include peer support information; for example, in the USA, “warmline” provides free mental health listening lines and a location-based directory (warmline.org), crisis hotline numbers, and free mental health applications.

Building a Physician-Patient Relationship

A recent qualitative study found that patients may perceive receiving lower-quality treatment because of their LSES [33]. Building trust in the physician-patient relationship is especially important for LSES HS patients. Emphasizing teamwork and shared decision making with patients can increase patient satisfaction and improve compliance [34]. Helpful strategies include simplifying medical information, frequently assessing understanding, and enlisting appropriate involvement of the patient’s family member or caregiver to establish short-term, easily achievable goals. Discussion of available telemedicine options may also help to build rapport.

Prevent Use of High-Cost Care Settings

HS patients utilize emergency department and inpatient hospital care at higher rates than patients with other chronic skin conditions such as psoriasis [35]. These

high-cost settings impose a financial burden on both the patient and the health care system. Printouts of a stepwise treatment plan can be provided with clear instructions for coping with flares and recognizing appropriate scenarios to contact the office.

Conclusion

HS patients carry a significant disease burden, and LSES patients with HS are a particularly vulnerable group. The aforementioned recommendations seek to lower health care barriers for this patient cohort. Although some of the services mentioned may not be accessible in certain geographic locations, smaller-scale and incremental changes can be implemented through patient-centered care. Further investigation is required to understand the complex relationship between LSES and HS, and promote beneficial social and health policy changes for our patients.

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Key Message

Low socioeconomic status hidradenitis suppurativa patients are a vulnerable population and clinicians can better address their needs with simple targeted strategies.

Disclosure Statement

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