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Analyzing Hidradenitis Suppurativa in Pediatric and Adolescent Populations

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ABSTRACT

Hidradenitis suppurativa (HS) is a chronic, recurrent, inflammatory skin disorder that increasingly affects pediatric and adolescent populations, with up to half of patients reporting symptom onset before adulthood. Most cases arise during early adolescence (ages 12–15) and show a marked female predominance. Early-onset HS is more likely in those with a positive family history and is associated with more extensive disease. Diagnostic delays and misdiagnoses are common due to clinical overlap with other skin conditions and under-recognition by providers, contributing to significant physical and psychosocial morbidity, including pain, disfigurement, malodor, and impaired quality of life. Pediatric HS is frequently associated with comorbidities such as obesity, acne, polycystic ovary syndrome, type 2 diabetes, inflammatory bowel disease, and psychiatric conditions like anxiety and depression. The pathogenesis in this population is multifactorial, involving genetic predisposition, hormonal influences, early puberty, and modifiable risk factors such as obesity. These factors collectively contribute to disease severity and underscore the need for hormonal evaluation in affected children. The psychosocial impact of pediatric HS is profound, often affecting self-esteem, social functioning, and mental health. Management of pediatric HS is challenging due to the absence of formal guidelines and limited pediatric-

specific data. Current treatment approaches rely heavily on adult studies, with topical and systemic antibiotics used for mild to moderate disease, and biologics (e.g., adalimumab, approved for patients ≥ 12 years), hormonal agents, and procedural interventions for more severe cases. However, evidence regarding treatment safety, long-term outcomes, and optimal strategies in this age group remains scarce. There is an urgent need for prospective, pediatric-focused studies to better define epidemiology, characterize comorbidities, and establish age-appropriate management strategies. Inclusion of pediatric patients in clinical trials is crucial for developing evidence-based, developmentally sensitive care and enhancing outcomes for this vulnerable population.

Keywords: Pediatric Patients, Skin Disorder, Obesity, Children, Psychiatric Disorders.

INTRODUCTION

Hidradenitis Suppurativa (HS) is a chronic, inflammatory skin disorder that primarily affects the apocrine gland-bearing regions, such as the axillae, groin, and anogenital areas. It is characterized by painful nodules, abscesses, sinus tracts, and scarring, making it not only physically debilitating but also a source of significant psychosocial distress. While HS is more commonly recognized in adults, its presence in pediatric and adolescent populations is becoming increasingly evident. In these younger individuals, the onset of symptoms can occur at an early age, leading to a long-term and persistent burden as the disease progresses through the years [1-6].

Epidemiologically, HS is considered a rare condition, with prevalence ranging from 0.1% to 1.0% in the general population. However, specific data on the prevalence of HS in pediatric populations remains limited. In terms of sex distribution, both adult and pediatric HS (pedHS) tends to affect females more frequently than males, with a female-to-male ratio of approximately 3:1. The disease tends to manifest after puberty, with many children and adolescents showing early signs during their teenage years. Children with HS may experience significant psychological impacts, including anxiety, depression, and social isolation. The stigma associated with visible skin lesions further exacerbates these emotional struggles. Thus, the psychosocial burden of HS in younger individuals is profound, with long-term effects on mental health and social development [1-6].

This early onset of disease can complicate the trajectory of care and lead to considerable delays in diagnosis. Studies suggest that up to 30% of individuals who later develop HS have symptoms that begin before the age of 18, indicating that the disease can have a substantial early impact on youth [1,2,5,6]. This delay is due in part to the lack of awareness among both patients and healthcare providers, leading to missed opportunities for early intervention that could reduce the severity of the disease and its long-term consequences.

Despite the recognition of HS in pediatric populations, there remains a significant gap in pedHS research. Most current literature on HS focuses on adult populations, and the few available pediatric studies come from small retrospective cohorts or case series, which frequently extrapolate findings from adult data. As a result, pediatric-specific diagnostic criteria, treatment strategies, and long-term outcome data are still largely underdeveloped, leaving healthcare providers with limited evidence to guide their clinical decisions [1-3,5,7]. This underscores the urgent need for focused research to better understand how HS affects children and adolescents and to develop tailored management protocols that consider the unique challenges of this age group.

The current review aims to synthesize the existing literature on pedHS, focusing on several key areas. First, it seeks to examine the epidemiology, clinical features, pathogenesis, comorbidities, psychosocial impacts, and treatment options for pedHS. Second, it aims to identify the gaps in knowledge, particularly those pertaining to the pediatric population, and to highlight the critical areas that require further research and attention. By addressing these knowledge gaps, the review aims to help guide future research efforts and improve the clinical care of children and adolescents suffering from HS.

METHODS

A systematic literature review was conducted using four major databases: PubMed, Google Scholar, Scopus, and EMBASE. The search encompassed publications from January 1, 2000, to June 30, 2025. Search terms included combinations of "hidradenitis suppurativa," "acne inversa," "pediatric," "adolescent," "children," and "youth." Studies were selected based on predefined inclusion and exclusion criteria.

Inclusion criteria comprised studies involving participants under 18 years of age diagnosed with hidradenitis suppurativa (HS), original research articles including cohort studies, cross-sectional studies, case-control studies, and case series, as well

as systematic reviews, meta-analyses, and narrative reviews focused on pedHS. Only peer-reviewed articles published in English were considered. Exclusion criteria included studies focused exclusively on adult populations (>18 years), articles not primarily addressing HS, non-peer-reviewed literature such as editorials, commentaries, and conference abstracts lacking full-text availability, and publications not in English.

RESULTS

The global prevalence of HS has an estimated range from 0.1% to 2% [8]. In the United States, the point prevalence is approximately 0.098%, with the highest rates observed among individuals aged 30 to 39 years (0.17%) [9]. PedHS is less common, with an estimated overall prevalence of 0.03%. Prevalence increases with age during adolescence: 0.11% in those aged 15–17 years, 0.03% in ages 10–14, and 0.002% in children younger than 9 [10]. Although rare, HS has been documented in children as young as six years old [11].

Although HS is traditionally thought to affect young adults between ages 20 and 24, recent studies suggest a bimodal distribution, with incidence peaks in late adolescence and midlife [6,12]. Western studies consistently report a female predominance, particularly in early-onset disease, whereas research from Asian countries describes a male predominance [5,9,10,13-15]. The disease disproportionately affects African American and biracial adolescent females, with the highest rates reported at 0.53% and 0.25% respectively, although some data suggest that prepubescent onset may be more common in males [9,10,16].

Many patients report disease onset in childhood or adolescence. Up to 50% develop symptoms between ages 10 and 21, and 7% report onset before age 13 [17,18]. Early-onset HS is associated with a higher likelihood of family history, indicating a possible genetic component [19].

HS disproportionately affects Black and Latino populations in the United States, with greater incidence, severity, and earlier onset [16,20]. These disparities may be compounded by limited access to dermatologic care and delays in diagnosis, contributing to more advanced disease at presentation.

HS diagnosis relies on clinical history, lesion recurrence, and characteristic involvement of intertriginous areas [3,5,21]. Pediatric lesions resemble those seen in adults and include inflammatory nodules, abscesses, double-headed comedones, sinus tracts, and varying degrees of scarring. Nodules may be encapsulated or ruptured with foul-smelling drainage, often mistaken for infection. Severe disease features include tunneling sinus tracts and dense scarring [1,3].

A multicenter review of 481 pediatric patients identified cysts or abscesses and tenderness as the most common presenting features. Dermatologic evaluations frequently revealed pustules, papules, comedones, nodules, ulcers, and sinus tracts [5]. The axillae are the most commonly affected site (75–85%), followed by the groin (47–58%) and buttocks (6–27%) [5,16]. Axillary involvements are more common in males, while groin involvement predominates in females [22]. Early-onset disease is often more extensive in distribution but not worse in disease severity by Hurley staging [19].

Pediatric HS is frequently misdiagnosed as folliculitis or comedonal acne [6]. The average delay between symptom onset and diagnosis is approximately 2-2.5 years [5,14,23]. Affected children often seek care from pediatricians, dermatologists, emergency physicians, and primary care providers before receiving the correct diagnosis [5,6]. Flares are commonly treated in emergency settings with antibiotics or incision and drainage, without recognition of underlying HS [1,24]. At initial evaluation, nearly half of pediatric patients already exhibit scarring, and between 35% and 53% present with Hurley stage II or III disease [5]. While referral bias may partially explain this, the data highlights the importance of early intervention to prevent long-term morbidity.

Comorbid conditions are highly prevalent in pedHS, with reported rates between 34% and 93% [5,6,14,25,26]. Obesity is the most consistently observed association, affecting 32.5% to 68.7% of pediatric patients, although there may be regional variation [5,6,14,15,26,27]. Obesity is considered an independent risk factor in HS, and obese children have nearly a sixfold increased risk of HS compared to their normal-weight peers [23,28,29]. Elevated BMI is positively correlated with increased risk of HS development in adulthood, and achieving normal weight before puberty may reduce future HS risk [30]. Although weight loss is often recommended, its effect on disease severity remains unclear, although studies have reported reduced disease severity and involved body sites following weight reduction [1,29].

Components of metabolic syndrome are frequently observed in pediatric patients. Higher rates of metabolic syndrome, hyperlipidemia, and hypertension are seen in pedHS patients

compared with controls [15,21-23]. A recent meta-analysis found pooled prevalence rates of 3% for hypertension and 7% for hyperlipidemia, in contrast to a significantly higher rate of 37% for obesity [31]. Non-White pedHS patients have an increased risk of acanthosis nigricans compared to White patients [26].

The role of hormonal imbalance in early-onset HS remains unclear. Although androgens are thought to contribute to disease pathogenesis, particularly through effects on sebum production and apocrine gland activity, large studies have not found systemic hyperandrogenism in most pediatric patients [2,11,18,26]. Instead, local androgen sensitivity at pilosebaceous units may be more relevant [2,32].

While case reports suggested links to premature adrenarche and precocious puberty, these represent fewer than 5% of cases in large series [5,6,16,33]. Polycystic ovarian syndrome (PCOS) is frequently observed in female pedHS patients [5,8,27,38], and hirsutism and menstrual irregularities are also common [14,26,34]. In adults, screening for signs of PCOS and precocious puberty is recommended, but hormonal workup is not recommended if signs are not present [35].

Although type 2 diabetes has been reported in up to 5% of pedHS patients, the association between pedHS and diabetes is inconclusive [6,15,31]. Some studies show increased prediabetes rates in males, while others report no significant differences in diabetes prevalence compared to controls [25,26].

HS significantly impairs quality of life and is associated with a substantial burden of mental health disorders in pediatric patients [23]. Affected children often report reduced participation in sports, difficulties with hygiene, and distress related to physical appearance, impacting broad domains of life including school attendance, physical activity, and self-esteem [26,36].

The Children's Dermatology Life Quality Index and visual analog scales for pain and itch are useful tools for assessing disease impact and guiding management [3]. In a study of adolescents (ages 12-17) with HS, the mean Skindex-Teen score was 45.7, considerably higher than scores reported in patients with psoriasis (21.1) or atopic dermatitis (29.4) [37]. Quality of life correlates with clinical severity, with higher Hurley stages associated with greater impairment [37].

Depression rates are elevated compared with the general pediatric population, with 32% of adolescents screening positive on PHQ-2 in one study [38]. Compared to adults, children with HS have a higher hazard ratio for developing depression [39]. Among 153 children with HS, the proportion with psychiatric conditions grew from 15.7% to 23.5% over five years, suggesting an increased risk of developing mental health issues after diagnosis [25]. In another study, nearly 1/3 (23/73) patients were diagnosed with a new psychiatric condition after HS diagnosis, especially among female patients [26]. Although research is limited, bipolar disorder has been associated with pedHS in previous studies [40]. Psychiatric diagnoses are also more frequent in children with both HS and obesity [6,41].

Pediatric HS is associated with several inflammatory and follicular occlusion disorders. Acne, psoriasis, pilonidal cysts, and pyoderma gangrenosum occur at higher rates in pedsHS patients than controls [5,6,14,25,26,34]. A recent meta-analysis identified acne as the most common comorbidity (43%), followed by obesity (37%), anxiety (18%), and hirsutism (14%) [31]. In rare cases, HS occurs as part of an autoinflammatory syndrome involving combinations of pyogenic or psoriatic arthritis, pyoderma gangrenosum, ankylosing spondylitis, and acne [42,43].

Down syndrome is strongly associated with HS [5,14,26,34]. Children with Down syndrome experience earlier HS onset and more frequent follicular occlusion disorders, including folliculitis, keratosis pillaris, acne vulgaris, and furunculosis [43,44].

Inflammatory bowel disease is more prevalent in pedHS [2,5,6,25]. One study reported gastrointestinal symptoms in nearly half of patients, with over 11% of those evaluated receiving an IBD diagnosis [45].

Treatment of HS in the pediatric population is based primarily upon recommendations for adult patients, small case series reports, expert opinions, and safety data extrapolated from medication use in other pediatric diseases. First-line treatment methods of mild HS, such as Hurley I and mild Hurley II, include topical therapy like clindamycin 1% solution [3]. If used long-term, it should be used alongside benzoyl peroxide to prevent the growth of antibiotic-resistant bacteria [46].

Local antiseptics such as chlorhexidine, zinc pyrithione washes, and azeleic acid are other topical options. However,

their efficacy as monotherapy is negligible [46]. Topical resorcinol, a treatment occasionally used in adult patients with HS, was found to have a response rate of up to 63% in pediatric patients [46]. Its safety is controversial, however, as it reportedly has had toxic effects in children [3]. Topical retinoids are sometimes recommended in patients with HS, although data is scarce regarding their efficacy in both children and adults [46]. For patients with unrelenting symptoms despite topical therapy, systemic therapies may be considered.

In patients with mild HS that is non-responsive to topical therapy, or in patients with moderate to severe HS, oral antimicrobials may be used. While tetracyclines are the most common antimicrobial prescribed in adults with HS, this therapy is contraindicated in children <10 years of age, given the risk of teeth discoloration [46]. Clindamycin 10-25 mg/kg/d administered every 6 to 8 hours is a common alternative in children. A small case series of pediatric patients has shown both efficacy and safety in the use of oral clindamycin 300 mg twice daily with or without rifampicin 300 mg twice daily. Oral azithromycin at a dose of 10 mg/kg/d for three days with oral zinc supplementation of 90 mg/day may be used for suppression of acute relapses of disease. Ertapenem was found to be effective in treating severe infections secondary to HS in adult patients, although it has not been studied for this use in children [46]. However, it has been safely used in children for the treatment of other severe infections.

Other oral therapies that are efficacious and safe for pediatric patients include immunosuppressants such as cyclosporine, dapsone, oral retinoids, and oral finasteride [3]. While small doses of oral finasteride of 1 to 5 mg per day have successfully treated HS in patients as young as six years of age, the long-term effects of finasteride on children with HS is unknown. Spironolactone and oral contraceptives are other options recommended for women with HS. Still, the safety of these drugs for use in HS in the pediatric population is not well-studied, and their effects on development during puberty are unknown [46]. Metformin has shown efficacy in treating milder cases of HS in adults while also treating comorbidities, but its specific use for HS has not been studied in children [46].

The final medication category for treatment of HS is biologics. For children above 12 years old who are unresponsive to systemic therapies, adalimumab is approved for the treatment of moderate-to-severe HS [3]. Other biologics have been used in children and adolescents with HS in individual cases. These include infliximab, etanercept, ustekinumab, anakinra, and gustekinumab. 96.2% of pediatric patients who used biologics experienced at least partial resolution of symptoms, and there was no report of adverse events [3].

Surgical intervention is an option for patients in later stages of HS. For the pediatric population, localized procedures like "deroofing" and incision and drainage are performed. However, these procedures often require general anesthesia in children, which carries additional risk [3].

Intralesional corticosteroid injections are effective in managing acute flares and pain in adult patients. However, this therapy has not been studied in children, making its efficacy and safety unknown. Successful treatment with botulinum toxin A and laser therapies have been described in individual cases in children [3]. However, large-scale studies have yet to be conducted using these therapies. In addition to each of these medical and surgical interventions for treatment of HS in children, psychotherapeutic strategies must also be considered, given the significant psychosocial impact this disease has on children.

HS can have a significant impact on the lives of children. The painful nature of this disease can hinder a child's school attendance, participation in activities, ability to exercise, and self-esteem. Some of these hindrances can contribute to obesity, further perpetuating the disease [4]. These children are additionally at increased risk of developing comorbid psychiatric disorders [3].

DISCUSSION

This review offers insight into how pedHS compares to the disease in adult populations. In both groups, HS presents with characteristic lesions in apocrine gland-bearing areas and has a significant psychosocial and physical burden. The female predominance and co-occurrence with obesity and mood disorders are similar to adult HS presentations.

Despite these similarities, several features are more prominent in children. The onset of pedHS is typically during adolescence, and many report symptoms before the age of 13. Diagnostic delay is more common in children, likely due to lower clinical suspicion and symptomatic overlap with other dermatologic conditions. These delays can lead to more advanced disease at diagnosis and long-term morbidity during critical developmental stages.

In terms of management, most pediatric therapies are extrapolated from adult treatment protocols, with few therapies formally studied in children. While some agents, like adalimumab, have regulatory approval for adolescents, the evidence base for other treatments is limited, and safety profiles in children are not well defined.

Early recognition of HS in pediatric patients is vital to preventing disease progression and permanent complications such as scarring and contractures [1]. There is an approximate gap of 2 years between the age of onset and diagnosis in pediatric patients with HS [5]. Early recognition and treatment of comorbidities in children with HS is likewise crucial to minimizing the long-term effects of these comorbid conditions. The multiple comorbidities frequently present in patients with HS necessitate a team of subspecialists to effectively and holistically treat these patients. The significant psychological impact HS has on children must also be addressed. Pediatric patients with HS often experience a hindrance in their school attendance, participation in activities, ability to exercise, and self-esteem, and often develop comorbid psychiatric disorders [3,4]. Addressing the psychosocial impact of this disease and helping patients develop effective coping mechanisms is vital to the holistic care of these children.

Existing literature regarding pedHS has limitations. Many studies are based on case reports or series, with small sample sizes and no information regarding long-term outcomes. Other limitations include outcome measures that are inconsistent across studies, and a lack of validated measures of pedHS [1,7]. Large-scale longitudinal studies with consistent methods of measuring severity and outcomes are needed.

Although HS can be identified in various ways, there are still many gaps in the precise diagnosis. Mechanisms are created to introduce new standards for evaluation [47]. Since current approaches are primarily focused on adult populations and cannot accurately represent adolescent and pediatric populations, future research should prioritize the development of standardized diagnostic criteria for pediatric populations. Additionally, important registries and prospective studies should evaluate metabolic, hormonal, and physiological comorbidities that are common in many pedHS cases [48]. The impact of integrated approaches on clinical outcomes, psychological well-being, and healthcare utilization could be evaluated through trials involving dermatologists, endocrinologists, dietitians, and mental health professionals [49]. Moreover, for early-onset HS, pediatric-focused interventional studies guarantee the required safety, effectiveness, and dosage of systemic agents such as adalimumab [50]. Thus, the need for adjusted treatment, derived from adult studies, suggests differences in pediatric and adolescent development and calls for future research to establish a more impactful intervention on emotional and developmental challenges for adolescents and pediatrics with HS.

CONCLUSION

Pediatric-specific research is essential to improve outcomes in HS. Investigation of epidemiology and comorbidities in pedHS can profoundly impact diagnosis and prognosis. Early recognition and diagnosis of HS can prevent progression of the disease. Delayed diagnosis of HS can result in life-long consequences such as disease progression and increased disability [5]. As a particularly vulnerable group, pedHS patients warrant further investigation into the unique clinical and psychosocial challenges they face [28]. Identifying age-appropriate management strategies can improve prognosis and quality of life for pediatric patients. Current management of pedHS is extrapolated from adult treatment [1]. Clinical trials including pediatric patients are crucial for developing evidence-based management strategies to enhance outcomes for pediatric patients. Overall treatment data are limited by small sample size, inconsistent outcome measures, and lack of validated pedHS measures [1]. These findings underscore the critical and immediate need for robust, pediatric-specific research to better understand and address HS in pediatric patients [51-55].

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CONFLICT OF INTEREST

The authors declare no conflicts of interest related to the content of this review.

PRIOR PRESENTATION

Contents of the manuscript have not been previously published and are not currently submitted elsewhere.

REFERENCES

1. Cotton CH, Chen SX, Hussain SH, Lara-Corrales I, Zaenglein AL. (2023). Hidradenitis Suppurativa in Pediatric Patients. Pediatrics. 151(5):e2022061049.
2. Choi E, Ooi XT, Chandran NS. (2022). Hidradenitis suppurativa in pediatric patients. J Am Acad Dermatol. 86(1):140-147.
3. Pustisek N, Bulic SO, Resic A, Bulic L, Brenner E. (2025). Hidradenitis suppurativa in children and adolescents. Clin Dermatol. 43(4):455-461.
4. Liy-Wong C, Pope E, Lara-Corrales I. (2015). Hidradenitis suppurativa in the pediatric population. J Am Acad Dermatol. 73(5 Suppl 1):S36-S41.
5. Liy-Wong C, Kim M, Kirkorian AY, Eichenfield LF, Diaz LZ, Horev A, et al. (2021). Hidradenitis Suppurativa in the Pediatric Population: An International, Multicenter, Retrospective, Cross-sectional Study of 481 Pediatric Patients. JAMA Dermatol. 157(4):385-391.
6. Hallock KK, Mizerak MR, Dempsey A, Maczuga S, Kirby JS. (2021). Differences Between Children and Adults With Hidradenitis Suppurativa. JAMA Dermatol. 157(9):1095-1101.
7. Masson R, Ma E, Parvathala N, Shih T, Atluri S, Hogeling M, et al. (2023). Efficacy of medical treatments for pediatric hidradenitis suppurativa: A systematic review. Pediatr Dermatol. 40(5):775-788.
8. Alikhan A, Sayed C, Alavi A, Alhusayen R, Brassard A, Burkhart C, et al. (2019). 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. J Am Acad Dermatol. 81(1):76-90.
9. Garg A, Kirby JS, Lavian J, Lin G, Strunk A. (2017). Sex- and Age-Adjusted Population Analysis of Prevalence Estimates for Hidradenitis Suppurativa in the United States. JAMA Dermatol. 153(8):760-764.
10. Garg A, Wertenteil S, Baltz R, Strunk A, Finelt N. (2018). Prevalence Estimates for Hidradenitis Suppurativa among Children and Adolescents in the United States: A Gender- and Age-Adjusted Population Analysis. J Invest Dermatol. 138(10):2152-2156.
11. Randhawa HK, Hamilton J, Pope E. (2013). Finasteride for the treatment of hidradenitis suppurativa in children and adolescents. JAMA Dermatol. 149(6):732-735.
12. Naik HB, Paul M, Cohen SR, Alavi A, Suàrez-Fariñas M, Lowes MA. (2019). Distribution of Self-reported Hidradenitis Suppurativa Age at Onset. JAMA Dermatol. 155(8):971-973.
13. Kurokawa I, Hayashi N; Japan Acne Research Society. (2015). Questionnaire surveillance of hidradenitis suppurativa in Japan. J Dermatol. 42(7):747-749.
14. Garcovich S, Fania L, Caposiena D, Giovanardi G, Chiricozzi A, De Simone C, et al. (2022). Pediatric Hidradenitis Suppurativa: A Cross-Sectional Study on Clinical Features and Treatment Approaches. J Cutan Med Surg. 26(2):127-134.
15. Medianfar CE, Fernandez LI, Bouazzi D, Jemec GBE. (2025). Global Hidradenitis Suppurativa Epidemiology: Exploring Themes and Gaps beyond Europe, Australia, and the USA. Dermatology. 1-12.
16. Braunberger TL, Nicholson CL, Gold L, Nahhas AF, Jacobsen G, Parks-Miller A, et al. (2018). Hidradenitis suppurativa in children: The Henry Ford experience. Pediatr Dermatol. 35(3):370-373.
17. Molina-Leyva A, Cuenca-Barrales C. Adolescent-Onset Hidradenitis Suppurativa: Prevalence, Risk Factors and Disease Features. Dermatology. 2019;235(1):45-50.
18. Scheinfeld N. (2015). Hidradenitis Suppurativa in prepubescent and pubescent children. Clin Dermatol. 33(3):316-319.
19. Deckers IE, van der Zee HH, Boer J, Prens EP. (2015). Correlation of early-onset hidradenitis suppurativa with stronger genetic susceptibility and more widespread involvement. J Am Acad Dermatol. 72(3):485-488.
20. Shao K, Hooper J, Feng H. (2022). Racial and ethnic health disparities in dermatology in the United States. Part 2: Disease-specific epidemiology, characteristics, management, and outcomes. J Am Acad Dermatol. 87(4):733-744.

21. Offidani A, Molinelli E, Sechi A, Brisigotti V, Campanati A, Raone B, et al. (2019). Hidradenitis suppurativa in a prepubertal case series: a call for specific guidelines. J Eur Acad Dermatol Venereol. 33(Suppl 6):28-31.

22. Seivright J, Collier E, Grogan T, Shih T, Hogeling M, Shi VY, et al. (2022). Pediatric hidradenitis suppurativa: epidemiology, disease presentation, and treatments. J Dermatolog Treat. 33(4):2391-2393.

23. Dattolo A, Sampogna F, Mastroeni S, Fania L, Ciccone D, Abeni D. (2025). Health-related quality of life and clinical characteristics of hidradenitis suppurativa in a pediatric population. Dermatol Reports. 17(2):10086.

24. Lambert RA, Stein SL. (2023). Pediatric hidradenitis suppurativa: Describing care patterns in the emergency department. Pediatr Dermatol. 40(3):434-439.

25. Tiri H, Jokelainen J, Timonen M, Tasanen K, Huilaja L. (2018). Somatic and psychiatric comorbidities of hidradenitis suppurativa in children and adolescents. J Am Acad Dermatol. 79(3):514-519.

26. Seivright JR, Collier E, Grogan T, Hogeling M, Shi VY, Hsiao JL. (2021). Physical and psychosocial comorbidities of pediatric hidradenitis suppurativa: A retrospective analysis. Pediatr Dermatol. 38(5):1132-1136.

27. Balgobind A, Finelt N, Strunk A, Garg A. (2020). Association between obesity and hidradenitis suppurativa among children and adolescents: A population-based analysis in the United States. J Am Acad Dermatol. 82(2):502-504.

28. Mirmirani P, Carpenter DM. (2014). Skin disorders associated with obesity in children and adolescents: a population-based study. Pediatr Dermatol. 31(2):183-190.

29. Kromann CB, Ibler KS, Kristiansen VB, Jemec GB. (2014). The influence of body weight on the prevalence and severity of hidradenitis suppurativa. Acta Derm Venereol. 94(5):553-557.

30. Jørgensen AR, Aarestrup J, Baker JL, Thomsen SF. (2020). Association of Birth Weight, Childhood Body Mass Index, and Height With Risk of Hidradenitis Suppurativa. JAMA Dermatol. 156(7):746-753.

31. Mohsen ST, Price EL, Lara-Corrales I, Levy R, Sibbald C. (2025). Prevalence of Comorbidities Among Pediatric Patients With Hidradenitis Suppurativa: A Meta-Analysis. JAMA Dermatol. 161(8):805-812.

32. Jastrząb B, Szepietowski JC, Matusiak Ł. (2023). Hidradenitis suppurativa and follicular occlusion syndrome: Where is the pathogenetic link? Clin Dermatol. 41(5):576-583.

33. Lewis F, Messenger AG, Wales JK. (1993). Hidradenitis suppurativa as a presenting feature of premature adrenarche. Br J Dermatol. 129(4):447-448.

34. Riis PT, Saunte DM, Sigsgaard V, Villani AP, Guillem P, Pascual JC, et al. (2020). Clinical characteristics of pediatric hidradenitis suppurativa: a cross-sectional multicenter study of 140 patients. Arch Dermatol Res. 312(10):715-724.

35. Garg A, Malviya N, Strunk A, Wright S, Alavi A, Alhusayen R, et al. (2022). Comorbidity screening in hidradenitis suppurativa: Evidence-based recommendations from the US and Canadian Hidradenitis Suppurativa Foundations. J Am Acad Dermatol. 86(5):1092-1101.

36. Chernyshov PV, Finlay AY, Tomas-Aragones L, Poot F, Sampogna F, Marron SE, et al. (2021). Quality of Life in Hidradenitis Suppurativa: An Update. Int J Environ Res Public Health. 18(11):6131.

37. McAndrew R, Lopes FCPS, Sebastian K, Diaz LZ. (2021). Quality of life in hidradenitis suppurativa: A cross-sectional study of a pediatric population. J Am Acad Dermatol. 84(3):829-830.

38. Smidt AC, Lai JS, Cella D, Patel S, Mancini AJ, Chamlin SL. (2010). Development and validation of Skindex-Teen, a quality-of-life instrument for adolescents with skin disease. Arch Dermatol. 146(8):865-869.

39. Wright S, Strunk A, Garg A. (2020). New-onset depression among children, adolescents, and adults with hidradenitis suppurativa. J Am Acad Dermatol. 83(5):1360-1366.

40. Rundle CW, Rietcheck H, Militello M, Laughter M, Presley CL. (2021). Pediatric Hidradenitis Suppurativa with Concomitant Bipolar Disorder: An Underrepresented Population. Dermatology. 237(5):769-770.

41. Lindsø Andersen P, Kromann C, Fonvig CE, Theut Riis P, Jemec GBE, Holm JC. (2020). Hidradenitis suppurativa in a cohort of overweight and obese children and adolescents. Int J Dermatol. 59(1):47-51.

42. Garcovich S, Genovese G, Moltrasio C, Malvaso D, Marzano AV. (2021). PASH, PAPASH, PsAPASH, and PASS: The autoinflammatory syndromes of hidradenitis suppurativa. Clin Dermatol. 39(2):240-247.

43. Giovanardi G, Chiricozzi A, Bianchi L, De Simone C, Dini V, Franceschini C, et al. (2018). Hidradenitis Suppurativa Associated with Down Syndrome Is Characterized by Early Age at Diagnosis. Dermatology. 234(1-2):66-70.

44. Firsowicz M, Boyd M, Jacks SK. (2020). Follicular occlusion disorders in Down syndrome patients. Pediatr Dermatol. 37(1):219-221.

45. Lloyd-McLennan AM, Ali S, Kittler NW. (2021). Prevalence of inflammatory bowel disease among pediatric patients with hidradenitis suppurativa and the potential role of screening with fecal calprotectin. Pediatr Dermatol. 38(1):98-102.

46. Chiang N, Sibbald C, Levy R, Lara-Corrales I. (2023). Hidradenitis Suppurativa in Children and Adolescents: An Update on Pharmacologic Treatment Options. Paediatr Drugs. 25(6):659-676.

47. Kittler NW, Williams JC, Kudlinski MV, Lester J, Hills N, Abuabara K, et al. (2022). Evaluation of Hidradenitis Suppurativa Diagnostic Criteria in Pediatric Patients. JAMA Dermatol. 158(12):1404-1408.

48. Sachdeva M, Kim P, Mufti A, Maliyar K, Sibbald C, Alavi A. (2022). Biologic Use in Pediatric Patients With Hidradenitis Suppurativa: A Systematic Review. J Cutan Med Surg. 26(2):176-180.

49. Naik HB, Lowes MA. (2020). Creation of a Registry to Address Knowledge Gaps in Hidradenitis Suppurativa and Pregnancy-Reply. JAMA Dermatol. 156(3):354.

50. Yi RC, Moran SK, Gantz HY, Strowd LC, Feldman SR. (2024). Biologics and Small Molecule Targeted Therapies for Pediatric Alopecia Areata, Psoriasis, Atopic Dermatitis, and Hidradenitis Suppurativa in the US: A Narrative Review. Children (Basel). 11(8):892.

51. Edigin E, Eseaton PO. (2022). A report of 1290 pediatric hidradenitis suppurativa hospitalizations: A nationwide analysis from the Kids' Inpatient Database. J Am Acad Dermatol. 86(6):1446-1449.

52. Gold DA, Reeder VJ, Mahan MG, Hamzavi IH. (2014). The prevalence of metabolic syndrome in patients with hidradenitis suppurativa. J Am Acad Dermatol. 70(4):699-703.

53. Shalom G, Freud T, Harman-Boehm I, Polishchuk I, Cohen AD. (2015). Hidradenitis suppurativa and metabolic syndrome: a comparative cross-sectional study of 3207 patients. Br J Dermatol. 173(2):464-470.

54. Mastacouris N, Strunk A, Garg A. (2023). Prevalence of polycystic ovarian syndrome among children and adolescents with hidradenitis suppurativa. J Am Acad Dermatol. 89(2):425-427.

55. Gasparic J, Theut Riis P, Jemec GB. (2017). Recognizing syndromic hidradenitis suppurativa: a review of the literature. J Eur Acad Dermatol Venereol. 31(11):1809-1816.