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Hidradenitis Süpürativalı Hastaların Klinik Özellikleri ve Laboratuvar Bulgularının Değerlendirilmesi

Evaluation of Clinical Features and Laboratory Findings of Patients with Hidradenitis Suppurativa

Pınar ÖZDEMİR ÇETİNKAYA(1), Güler VAHABOĞLU(2), Samet Sancar KAYA(3), Hatice Meral EKŞİOĞLU(4)

ÖZET

AMAÇ: Hidradenitis suppurativa (HS), intertriginöz bölgelerde tekrarlayan inflame foliküler lezyonlar, nodüller, apseler ve daha sonraki evrelerde drene olan sinüs yolları ve skarlarla prezente olan kronik inflamatuar bir deri hastalığıdır. Hastalığın kronik, tekrarlayan seyri, ağrılı, kötü kokulu lezyonlar, fistül/skar oluşumu ve eşlik eden komorbiditeler nedeniyle HS, yaşam kalitesini önemli ölçüde azaltır ve psikolojik bozukluklar ile ilişkilidir. Bu çalışmada, HS'li hastaların genel özelliklerini ve hastalık şiddetini ve hastaların psikososyal durumlarını etkileyen faktörleri değerlendirmeyi amaçladık.

GEREÇ VE YÖNTEM: Bu retrospektif tanımlayıcı çalışmada HS'li 30 hastanın tıbbi kayıtları analiz edildi. Sosyodemografik veriler, hastaların genel özellikleri, HS'nin klinik özellikleri ve laboratuvar bulguları kaydedildi. Hastalardan Hastane Anksiyete ve Depresyon Ölçeği (HADÖ) ve Dermatoloji Yaşam Kalitesi İndeksini doldurmaları istendi.

BULGULAR: Hidradenitis süpürativali 30 hastanın 16'sı (%53,3) kadın, 14'ü (%46,7) erkek olup yaş ortalaması 36,86 ± 12,62 yıl idi. Hurley evreleme sistemine göre hastaların %26,7'si evre I, %60'ı evre II ve %13,3'ü evre III hastalığa sahipti. Perineal/skrotal ve perianal tutulumu olan hastalarda Hurley evreleme sistemine göre hastalık şiddeti istatistiksel olarak anlamlı şekilde artmıştı. Hurley evreleme sistemine göre hastalık şiddeti ile medyan CRP düzeyleri arasında istatistiksel olarak anlamlı ilişki bulundu. Hurley evre III hastalığı olan hastalarda CRP düzeyleri Hurley evre I hastalığı olanlara göre anlamlı şekilde yüksekti. İnguinal tutulumu olan hastalarda ortalama HADS-A ve HADS-D skorları inguinal tutulumu olmayanlara göre anlamlı şekilde yüksekti. Ayrıca perianal tutulumu olan hastaların ortalama HADS-D skorları perianal tutulumu olmayanlara göre anlamlı şekilde yüksekti.

SONUÇ: Bu çalışma, perineal/skrotal ve perianal tutulumu olan hastaların, hastalık şiddetinin anlamlı şekilde arttığını göstermektedir. Üstelik, inguinal ve perianal tutulumu olan hastaların anksiyete ve depresyon skorları anlamlı şekilde daha yüksekti. Klinisyenler HS'li hastalarda depresyon ve anksiyete riskinin farkında olmalıdır.

Anahtar kelimeler: anksiyete, depresyon, HADS, hidradenitis süpürativa, laboratuvar bulguları

ABSTRACT

AIM: Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease that clinically presents with recurrent inflamed follicular lesions, nodules, abscesses, and, in later stages, draining sinus tracts and scars in intertriginous areas. Due to the chronic, recurrent course of the disease, painful, malodorous lesions, fistula/ scar formation, and accompanying comorbidities, HS significantly reduces the quality of life and is associated with psychological impairment. In this study, we aimed to evaluate the general characteristics of patients with HS and the factors influencing their disease severity and psychosocial status.

MATERIAL AND METHOD: This retrospective descriptive study analyzed the medical records of 30 patients with HS. Sociodemographic data, general characteristics of the patients, clinical features of HS, and laboratory findings were noted. The patients were asked to fill out Hospital Anxiety and Depression Scales (HADS) and Dermatology Life Quality Index.

RESULTS: Of 30 patients with HS, 16 (53.3%) were females, and 14 (46.7%) were males, with a mean age of 36.86 ± 12.62 years. According to the Hurley staging system, 26.7% of the patients had stage I, 60% had stage II, and 13.3% had stage III disease. The patients with perineal/scrotal and perianal involvement had a statistically significantly increased disease severity according to the Hurley staging system. A statistically significant relationship was found between the disease severity according to the Hurley staging system and the median CRP levels. CRP levels in the patients with Hurley stage III disease were significantly higher than those with Hurley stage I disease. The mean HADS-A and HADS-D scores in the patients with inguinal involvement were significantly higher than those without inguinal involvement. Also, the mean HADS-D scores of the patients with perianal involvement were significantly higher than those without perianal involvement.

CONCLUSION: This study shows that the patients with perineal/scrotal and perianal involvement had significantly increased disease severity. Moreover, the patients with inguinal and perianal involvement had significantly higher anxiety and depression scores. Clinicians should be aware of the risk of depression and anxiety in patients with HS.

Keywords: anxiety, depression, HADS, hidradenitis suppurativa, laboratory findings

1 Şişli Hamidiye Etfal Training and Research Hospital, Department of Dermatology and Venereology, İstanbul, Türkiye
2 Mamak Su Medical Centre, Dermatology and Venereology, Ankara, Türkiye
3 Adıyaman University, Training and Research Hospital, Department of Algology, Adıyaman, Türkiye
4 University of Health Sciences, Ankara Training and Research Hospital, Department of Dermatology and Venereology, Ankara, Türkiye

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Sorumlu Yazar / Corresponding Author:
Pınar ÖZDEMİR ÇETİNKAYA

Address: Huzur Mah. Cumhuriyet ve Demokrasi Cad. No:1 Sarıyer/İstanbul Türkiye
Phone: +905063388450
E-mail: pinarozdemir44@gmail.com

Yazar bilgileri:
Pınar ÖZDEMİR ÇETİNKAYA: ORCID: 0000-0001-5286-3260,
e-posta:pinarozdemir44@gmail.com
Güler VAHABOĞLU: ORCID: 0000-0002-5396-531, e-posta: pisipisi44@hotmail.com
Samet Sancar KAYA: ORCID: 0000-0003-4819-1128,e-posta: sametsancarkaya@hotmail.com
Hatice Meral EKŞİOĞLU: ORCID: 0000-0003-0172-4548, e-posta: meral_eksioglu@yahoo.co.uk

INTRODUCTION

Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease that clinically presents with recurrent inflamed follicular lesions, nodules, abscesses, and, in later stages, draining sinus tracts and scars in intertriginous areas.1 The most commonly involved sites are axillary, inguinal, anogenital, perineal, and inframammary regions.2 The age of onset is usually between 30 and 40 years of life.3,4 HS is also reported to be associated with several comorbidities, such as metabolic syndrome, inflammatory bowel disease, cardiovascular diseases, and axial spondyloarthritis.5-7

HS is diagnosed clinically. Skin biopsy is not routinely taken, and no confirmatory laboratory tests are needed. The Hurley staging system is still the most commonly used system to determine the severity of the disease, as it is easy to apply in outpatient settings. The disease is divided into three stages in the Hurley staging system: mild, moderate, and severe.8 Studies in the literature reported that male gender, smoking, and obesity were associated with severe disease.9, 10 Although there is no confirmatory laboratory test for diagnosing hidradenitis suppurativa, complete blood count, ESR, CRP, complete urine test, serum iron level, and serum electrophoresis are recommended to manage patients.11, 12

Due to the chronic, recurrent course of the disease, painful, malodorous lesions, fistula/ scar formation, and accompanying comorbidities, HS significantly reduces the quality of life (QoL) and is associated with psychological impairment.1 Moreover, involvement of the anogenital region was reported to cause an additional emotional and physical burden.13

In the present study, we aimed to evaluate the general characteristics of patients with HS and the factors influencing their disease severity and psychosocial status.

MATERIAL AND METHOD

This retrospective descriptive study was carried out over one year in the medical archives of the Department of Dermatology in a tertiary care hospital. The Institutional Ethics Committee gave approval for the study (25/03/2015, No:0588). The study was performed in accordance with the latest version of the 'Helsinki Declaration' and 'Guidelines for Good Clinical Practice'.

The medical records of consecutive patients admitted to a dermatology outpatient clinic and/or received inpatient treatment with the diagnosis of HS were compiled and analyzed. The data of 30 patients were examined for the study. Sociodemographic data and general characteristics of the patients, such as age, sex, body mass index (BMI), and smoking habit, were recorded. Patients' medical history, the age of disease onset, the duration of the disease, and accompanying other diseases were noted. The involvement sites were determined using dermatological examination findings, and the disease severity was assessed using the Hurley stage. Hurley staging is a well-known, easy-to-apply, and most commonly used staging system in clinical practice. It divides the disease into 3 stages: mild to severe. Self-limiting inflammatory lesions resolving without scarring are seen in stage I disease. Stage II disease presents with single or multiple lesions with normal-appearing skin between them and discrete lesions of recurrent abscesses with tunnels and scars. Lastly, tunnels, scars, and inflammatory abscesses coalesce to form characteristic chronic inflammatory lesions seen in stage III disease.8

The patients were evaluated for axial and peripheral arthropathy by a specialist from the Physical Medicine and Rehabilitation Department. Characteristic symptoms and signs such as pain, swelling, tenderness, increased temperature, and joint redness were questioned to assess the joint involvement. On physical examination, joint range of motion was checked for peripheral arthropathy. For axial arthropathy, spinous and paraspinous sensitivity, spinal mobility were evaluated, and sacroiliac compression and distraction tests, as well as the Mennel and the Gaenslen tests, were performed. In the radiological examination, hand, foot, and knee radiographs, cervical-thoracic-lumbar two-way vertebra radiographs, and standard anteroposterior pelvis radiographs were evaluated.

The patients were asked to fill out Hospital Anxiety and Depression Scales (HADS) and Dermatology Life Quality Index (DLQI) to evaluate their psychological status and quality of life. The validated Turkish version of the HADS was used to question symptoms of anxiety and depression [14]. HADS is a self-administered questionnaire consisting of 14 items scored with a 4-point Likert scale (0-3 points), and it has 2 subscales as HADS-Anxiety (HADS-A) and HADS-Depression (HADS-D) evaluated separately with 7 questions for each.15 The cut-off scores for depression and anxiety were determined to be 7 and 10, respectively.14 The validated Turkish version of the DLQI, which is a 10-item self-rating questionnaire with a 4-point Likert scale (0-3 points), was used to assess the QoL of the patients.16, 17 DLQI score ranges from 0-30. As the score increases, quality of life worsens, and scores >10 indicate that quality of life is moderate-to-severely affected.

Statistical Analysis

The statistical analyses were conducted using the IBM SPSS Statistics for Windows, Version 20.00 (Armonk, New York, USA: IBM Corp.), and $p<0.05$ was statistically significant. The distribution of the variables was determined by the Shapiro-Wilk tests. The chi-square test was employed to compare categorical independent data, while the Fischer's exact test was utilised when one or multiple cells had an expected count of less than 5. The Student's T and ANOVA tests were used to compare continuous independent data with parametric distribution. The Mann-Whitney U and Kruskal-Wallis tests were used to compare continuous independent data with non-parametric distribution. Correlation analyses of quantitative independent data with non-parametric distribution were performed by the Spearman test. The power of the correlations was defined by r value, ranged as follows: very weak: r<2; weak: r=0.2-0.39; moderate: r=0.4-0.59; strong: r=0.6-0.8; very strong: r>0.8.

RESULTS

Of 30 patients with HS, 16 (53.3%) were females, and 14 (46.7%) were males, with a mean age of 36.86 ± 12.62 years. Demographic and clinical features of the patients with HS are presented in Table 1.

Table 1. Demographic and clinical features of the patients with HS

HS group (n=30)	
Sex (n/%)	
Female	16 (53.3%)
Male	14 (46.7%)
Age (Mean±SD, years)	36.86 ± 12.62
Body mass index (Mean±SD, kg/m²)	28.64 ± 5.60
Body mass index classification (n/%)	
Normal weight (18.5-24.99 kg/m²)	11 (36.7%)
Overweight (25-29.99 kg/m²)	6 (20%)
Obesity (≥30 kg/m²)	13 (43.3%)
Smoking Habit (n/%)	
Yes	21 (70%)
No	9 (30%)
Medical History (n/%)	
None	11 (36.7%)
Present	19 (63.3%) Diabetes mellitus: 8 (26.6%) Hypertension: 8 (26.6%) Metabolic syndrome: 7 (23.3%) Hyperlipidemia: 6 (20%) Acne vulgaris 6 (20%) Hirsutism: 3 (10%) Crohn disease: 2 (6.7%) Familial Mediterranean fever: 2 (6.7%) Ulcerative colitis: 1 (3.3%) Major depression: 1 (3.3%) Bipolar affective disorder: 1 (3.3%)
Follicular occlusion tetrad (n/%)	HS, acne conglobata, dissecting cellulitis of the scalp and pilonidal sinus: 2 (6.7%) HS, acne conglobata, dissecting cellulitis of the scalp: 1 (3.3%) HS, acne conglobata: 1 (3.3%) HS, pilonidal sinüs: 5 (16.5%)
Age of disease onset [Median, (IQR), years]	27 (16.75)
Duration of disease [Median, (IQR), months]	72 (135)
Hurley Staging System (n/%)	
Stage I	8 (26.7%)
Stage II	18 (60%)
Stage III	4 (13.3%)
Sites of involvement (n/%)	
Axillary	23 (76.7%)
Inguinal	18 (60%)
Perineal/scrotal	9 (30%)
Perianal	6 (20%)
Gluteal/Intergluteal	8 (26.7%)
Inframammary	8 (26.7%)
Intermammary	5 (16.5%)
Number of sites of involvement (n/%)	
One-site involvement	9 (30%)
Two-site involvement	7 (23.4)
Three or more-site involvement	14 (46.6%)
Axial and peripheral arthropathy (n/%)	0

IQR: Interquartile range, HS: Hidradenitis Suppurativa, SD: Standard deviation

Table 2. Laboratory measurements of patients with HS

Hidradenitis Suppurativa (n=30)	
Laboratory Parameters	
WBC (mean ± SD, x10^9/L)	8.97 ± 2.90
RBC (mean ± SD, x10^{12}/L)	4.81 ± 0.51
Hb (mean ± SD, gr/dl)	13.04 ± 1.89
Platelet [median, (IQR), x10^9/L]	274.5 (122)
Glucose [median, (IQR), mg/dl]	101 (45.75)
Urea (mean ± SD, mg/dl)	29.26 ± 7.94
Creatinine (mean ± SD, mg/dl)	0.87 ± 0.16
AST [median, (IQR), U/L]	20 (8.25)
ALT [median, (IQR), U/L]	18.5 (8.25)
Iron (mean ± SD, µg/dl)	65.53 ± 27.81
UIBC (mean ± SD, µg/dl)	312.99 ± 82.78
TIBC (mean ± SD, µg/dl)	373.70±74.73
Ferritin [median, (IQR), µg/ml]	20 (37.03)
Total cholesterol (mean ± SD, mg/dl)	180.46 ± 40.82
TG (mean ± SD, mg/dl)	144.56 ± 65.62
LDL (mean ± SD, mg/dl)	111.56 ± 32.61
HDL (mean ± SD, mg/dl)	40.13 ± 8.53
ESR [median, (IQR), mm/hour]	13 (24.25)
CRP [median, (IQR), mg/dl]	0.71 (3.08)
Laboratory Parameters Classification	
Leukocytosis (n/%)	7 (23.3%)
Anemia (n/%)	8 (26.7%)
High glucose (n/%)	16 (53.3%)
Low iron (n/%)	16 (53.3%)
High UIBC (n/%)	17 (56.7%)
High TIBC (n/%)	6 (20%)
Low ferritin (n/%)	7 (23.3%)
High total cholesterol (n/%)	11 (36.7%)
High TG (n/%)	6 (20%)
High LDL (n/%)	6 (20%)
Low HDL (n/%)	16 (53.3%)
High ESR (n/%)	14 (46.7%)
High CRP (n/%)	13 (43.3%)

ALT: Alanine transaminase, AST: Aspartate aminotransferase, CRP: C-reactive protein, ESR: Erythrocyte sedimentation rate, HDL: High-density lipoprotein, IQR: Interquartile range, LDL: Low-density lipoprotein, SD: Standard deviation, TIBC: Total iron binding capacity, TG: Triglyceride, UIBC: Unsaturated iron binding capacity
Data were expressed as mean ± SD and median (IQR) in continuous variables according to normality distribution and n (%) in categoric variables.

Laboratory measurements of patients with HS are also shown in Table 2. None of the patients in the study showed signs of axial or peripheral arthropathy based on physical examination and direct radiographs.

The psychosocial status of the patients with HADS and DLQI scores is given in Table 3.

Table 3. Evaluation of psychosocial status of the patients with HADS and DLQI scores

HS group (n=30)	
DLQI [median, (IQR)]	10 (11.25)
HADS-A (mean ± SD)	10.60 ± 4.88
HADS-A classification (n/%)	
Anxiety Present	18 (60%)
Anxiety Absent	12 (40%)
HADS-D (mean ± SD)	8.86 ± 5.55
HADS-D classification (n/%)	
Depression Present	19 (63.3%)
Depression Absent	11 (36.7%)

HAD-A: Hospital anxiety and depression-anxiety, HAD-D: Hospital anxiety and depression-depression, IQR: Interquartile range, SD: Standard deviation
Data were expressed as mean ± SD and median (IQR) in continuous variables according to normality distribution and n (%) in categoric variables.

There were statistically significant positive correlations between the patients' DLQI scores and HADS-A/HADS-D scores (r=0.598, p<0.001, r=0.551, p=0.002, respectively). However, there was no statistically significant correlation between the disease severity according to Hurley Stage and the scores of DLQI, HADS-A and HADS-D (p=0.171, p=0.225, p=0.114, respectively).
Disease Severity and Related Factors According to Hurley Staging

System:
There was no statistically significant relationship between disease severity determined by the Hurley staging system and age, age of onset, BMI, smoking, number of areas involved, and accompanying metabolic syndrome (p>0.05). A statistically significant relationship was found between disease severity and duration of disease (p=0.024). The disease duration was significantly longer in Hurley stage III patients than in Hurley stage I patients (p=0.020). In addition, a statistically significant positive correlation was found between the duration and severity of the disease (r=0.489, p=0.006).
There was no statistically significant difference in the disease severity according to the Hurley staging system between the patients with and without axillary, inguinal, gluteal/intergluteal, inframammarian, intermammarian involvement (p=0.489, p=0.130, p=0.065, p=0.617, p=0.645, respectively). The patients with perineal/scrotal and perianal involvement had a statistically significantly increased disease severity according to the Hurley staging system compared to those without perineal/scrotal and perianal involvement (p=0.002, p=0.021, respectively).

No statistically significant relationship was found between the disease severity determined by the Hurley staging system and the median DLQI scores, mean HADS-A and HADS-D scores (p=0.205, p=0.416, p=0.210, respectively).

No statistically significant relationship was found between the disease severity according to the Hurley staging system and the mean Hb and median ESR levels (p=0.247, p=0.269, respectively). However, a statistically significant relationship was found between the disease severity according to the Hurley staging system and the median CRP levels (p=0.007) (Table 4).

Table 4. Relationship between the disease severity according to Hurley staging system and ESR and CRP levels

Patients with HS (n=30)			
	ESR (mm/hour)		
Hurley Stage	Median	IQR	p
Stage I	12	23.25	0,269
Stage II	12.5	15.25	
Stage III	92	97.25	
	CRP (mg/dl)		
Hurley Stage	Median	IQR	p
Stage I	0,33	0.62	0,007*
Stage II	0,71	2.34	
Stage III	9	6.16	

CRP: C-reactive protein, ESR: Erythrocyte sedimentation rate, HS: Hidradenitis suppurativa
Data with non-parametric distribution were expressed as median (IQR).
Kruskal Wallis test was used. *p<0.05

CRP levels in the patients with Hurley stage III disease were significantly higher than those with Hurley stage I disease (p=0.005). The median ESR and CRP levels were statistically significantly higher in patients with perianal involvement, while CRP levels were statistically significantly higher in those with inguinal, perineal/scrotal, and intergluteal involvement compared to those without such involvement (p=0.001, p=0.001, p=0.491, p=0.028, p=0.137, p=0.017, p=0.170, p=0.008, respectively). There was no difference in the median ESR and CRP levels between patients with axillary, inframammary, and intermammary involvement and those without such involvement (p>0.05).

Dermatology life quality index, HADS-A, HADS-D Scores and Related Factors:

There was no statistically significant difference between the patients with and without axillary, perineal/scrotal, gluteal/intergluteal, inframammarian, intermammarian involvement in terms of DLQI, HADS-A, and HADS-D scores (p>0.05).
A statistically significant difference was found between the mean HADS-A and HADS-D scores of the patients with and without inguinal involvement (p=0.048, p=0.004). HADS-A and HADS-D scores in the patients with inguinal involvement were higher than those without inguinal involvement. There was no statistically significant difference in the median DLQI scores between the patients with and without inguinal involvement (p=0.053). A statistically significant difference was found between the mean HADS-D scores of the patients with and without perianal involvement (p=0.021). HAD-D scores in the patients with perianal involvement were higher than in the patients without perianal involvement. There was no statistically significant difference in the median DLQI and mean HADS-A scores between patients with and without perianal involvement (p=0.705, p=0.116).

No statistically significant correlation was found between the number of sites of involvement in the patients and DLQI scores(r=0.294, p=0.115). A statistically significant positive correlation was found between the number of sites of involvement and HADS-A/HADS-D scores (r=0.440, p=0.015; r=0.414, p=0.023).

Table 5. Correlation of the number of sites of involvement and HADS-A, HADS-D and DLQI scores in patients with HS

Patients with HS (n=30)						
	HADS-A Score		HADS-D Score		DLQI Score	
Number of sites of involvement	r	0,440	r	0,414	r	0,294
	p	0,015*	p	0,023*	p	0,115

HADS-A: Hospital anxiety and depression scale-anxiety, HADS-D: Hospital anxiety and depression scale-depression, DLQI: Dermatology life quality index
Spearman Rho correlation was used. *p<0.05

As the number of sites of involvement increased, mean scores of HADS-A and HADS-D increased.

DISCUSSION

Hidradenitis suppurativa is a multidimensional, chronic, debilitating skin disease. Firstly, it is associated with systemic comorbidities such as metabolic syndrome and inflammatory bowel disease and requires systemic evaluation of these conditions.5, 6 Besides, the involvement of intertriginous regions with nodules, abscesses, and draining sinus tracts increases the level of inflammatory biomarkers in the body and necessitates investigating laboratory values. Last but not least, it significantly negatively impacts the patient's QoL.
In the present study, we aimed to elucidate the clinical features and laboratory findings of patients with HS. Another purpose of the study was to assess the relationship between disease severity, depression, anxiety, and QoL in patients with HS. First of all, the patients with perineal/scrotal and perianal involvement had a statistically significantly increased disease severity. Furthermore, the mean HADS-A and HADS-D scores of the patients with inguinal involvement and HADS-D scores of the patients with perianal involvement were significantly higher than those without these involvements. However, the involvement of these regions had no significant impact in the QoL.
With regard to the studies evaluating the factors affecting the disease severity in the literature, Schrader et al. reported that 45.5% of the patients were Hurley stage I, 41.5% were Hurley stage II, and 13% were Hurley stage III in their retrospective study with 846 Dutch patients. In addition, male gender, obesity, smoking (package/year), disease duration, and axillary, perianal, and mammarian involvement were found to be associated with HS severity. However, age of onset, family history, severe acne, and diabetes mellitus were not found to be associated with disease severity.9 Vazquez et al. conducted a population-based study in Olmsted County, Minnesota, to investigate the potential associations of HS with other diseases and factors. Of the 268 patients with HS, 59.7% had Hurley stage I, 38.1% had Hurley stage II, and 2.2% had Hurley stage III disease. Age, male gender, and smoking were found to increase disease severity. However, no association was found between disease severity and BMI, depression, acne, or pilonidal disease.18 In this study, 26.7% of the patients had stage I, 60% had stage II, and 13.3% had stage III disease. In line with previous studies, the findings of our study revealed that the relationship between disease severity and duration, as well as perineal/scrotal and perianal involvement, was significant.

Considering the laboratory findings of HS, inflammatory markers such as ESR and CRP are elevated. A recent study evaluated the inflammatory biomarkers in 102 patients with HS and found that CRP level, neutrophil, lymphocyte, monocyte, and platelet count were significantly higher in patients with HS than in the control group.19 In another recent study, Andriano et al. evaluated serum inflammatory markers and white blood cell profiles in a retrospective cohort study of 404 patients with HS and reported that CRP, ESR, and IL-6 levels were significantly elevated among patients with severe disease.20 Jiménez-Gallo et al. investigated the relationship between CRP, ESR, and the clinical inflammatory activity of 74 patients with HS. They reported that serum CRP and ESR levels were significantly higher in HS patients and associated with disease activity.21 Riis et al. investigated the systemic inflammatory burden in 50 patients with HS and found that CRP levels were statistically significantly higher in the HS group and positively correlated with the Hurley stage. In addition, the mean leukocyte count in HS patients was 9656 x109/L, which was significantly higher than in the control group.22 This study found leukocytosis in 23.3% of the patients, elevated ESR and CRP levels in 46.7%, and 43.3% of the patients. In accordance with the literature, a statistically significant relationship was found between the severity of the disease and CRP levels according to the Hurley staging system. With these findings, it can be concluded that CRP and ESR levels are effective indicators of active, severe disease and can be used in treatment monitoring.
The psychosocial impact of HS is a well-established issue. Numerous studies in the literature evaluate the psychological comorbidities of patients with HS, and these studies were analyzed in various meta-analyses. In 2019, Patel et al. analyzed data from 27 studies in their meta-analysis. They found higher frequencies of depression (26.5%) and anxiety (18.1%) in the HS patient group. Moreover, patients with HS had higher odds of depression (OR:2.54) and anxiety (OR:2).23 Also, in 2019, Machado et al. evaluated 10 observational studies to find out the prevalence and odds of depression and anxiety in patients with HS. The prevalence of depression and anxiety was 16.9% and 4.9%, respectively. The OR for depression in patients with HS was 1.84, but the OR for anxiety could not be determined due to insufficient data.24 In 2020, Jalenques et al. included 28 articles on depression and 12 articles on anxiety in their meta-analysis. They calculated a prevalence of 21% of depression and 12% of anxiety in patients with HS, with vast variations due to diagnostic tools used (self-administered questionnaires, medical records, etc). Patients with HS had a 1.99 and 1.97-fold increased risk for depression and anxiety, respectively.1 In this study, symptoms of depression and anxiety were detected in 63.3% and 60% of the patients. These frequencies were higher than the frequencies reported in the literature. The small study population, the use of self-administered questionnaires rather than thorough psychiatric evaluation, and the higher ratio of patients with severe disease may have led to this result. Considering that increased depression and anxiety scores reflect disease-related psychological morbidity, depression, and anxiety scores can be used as a morbidity assessment tool in future studies. There were other noteworthy findings in this study. Patients with inguinal and perianal involvement had significantly higher scores of depression and/or anxiety. These patients also had higher levels of inflammatory parameters in their blood. Ooi et al. conducted a study with 45 patients to assess the psychosocial burden of HS and reported that higher objective disease severity scores (such as Hurley stage, modified Sartorius score) correlated with poorer QoL and increased anxiety and depression. In addition, they found that inguinal, gluteal, and suprapubic involvements resulted in poorer QoL, whereas inguinal and gluteal involvements were correlated with anxiety/depression.25 From another point of view, it is widely known that patients with HS experience sexual disturbances, and the involvement of genital regions may contribute to it. Kurek et al. investigated the impairment of sexual life in 44 patients with HS and 41 controls. They reported that patients with HS had sexual dysfunctions and sexual distress in comparison to controls.26 In light of these findings, clinicians should be aware of the psychological comorbidities of patients with HS and screen them at routine intervals.

The present study has several limitations. The main limitation was that it was a retrospective study without a control group containing a small number of patients. The sample size might not be enough to determine the true prevalence of psychological comorbidities. Additionally, the psychological status of the study population was measured by self-administered questionnaires that were widely used in clinical practice. Still, these comorbidities were not diagnosed through a detailed psychiatric evaluation by a psychiatrist.

CONCLUSION

Our study indicates that the patients with perineal/scrotal and perianal involvement had significantly increased disease severity. Moreover, the patients with inguinal and perianal involvement had significantly higher anxiety and depression scores. Further prospective studies with large population-based samples are needed to evaluate the relationship between the areas of involvement of HS, the number of sites affected, the severity of the disease, and the psychological state. However, for the immediate future, clinicians should be conscious of the risk of depression and anxiety in patients with HS and manage these patients from a holistic perspective. Rather than focusing only on the disease severity and treatment of the lesions, all the patient's physical, emotional, and functional symptoms should be questioned and addressed in the treatment schedule.

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Data collection/Processing: PÖÇ, SSK
Data analysis and interpretation: PÖÇ, SSK, GV
Literature review: PÖÇ
Spelling: PÖÇ
Critical review: GV, HME

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