

The Effects of Behçet's Disease on LUTS in Male Patients

Erkek Hastalarda Behçet Hastalığının AÜSS Üzerine Etkileri

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Abstract

Objective In this study, we aimed to evaluate the relationship between Behçet's disease (BD) and lower urinary tract symptoms (LUTS).

Materials and Methods In June 2019 to 2021, 56 male patients who applied to Pamukkale University rheumatology and dermatology outpatient clinics, were diagnosed with Behçet's disease according to the criteria of the international Behçet study group and accepted to participate in the study, were subjected to urological evaluation. The patients were evaluated in terms of Behçet's disease and urological conditions causing LUTS, and the relationship between Behçet's disease and LUTS was examined.

Results The mean age of the patients was 42.6 years. The mean activity score of BD was 4.6±3.2 and the mean IPSS score was 7.3±7.3. Gender did not have a significant effect on the instantaneous activity score of Behçet's disease. A statistically significant finding was found between Behçet's disease instantaneous activity score and IPSS score, frequency of daytime urination, nocturia and urgency. However, no significant relationship was found with uroflowmetry parameters.

Conclusion Lower urinary tract involvement in BD without neurological involvement may present with symptom scores before uroflowmetry parameters.

Keywords Behçet's disease, Lower urinary tract symptoms, Urinary incontinence, Nocturia, Urgency, Storage symptoms

Öz

Amaç Bu çalışmada, Behçet hastalığı (BH) ile alt üriner sistem semptomlarının (AÜSS) ilişkisini değerlendirmeyi amaçladık.

Gereç ve Yöntem 2019 ve 2021 haziran ayları arasında Pamukkale üniversitesi romatoloji ve dermatoloji polikliniklerine başvuran uluslararası Behçet çalışma grubu kriterlerine göre Behçet hastalığı tanısı almış ve çalışmaya katılmayı kabul eden 56 erkek hasta ürolojik değerlendirmeye tabi tutuldu. Çalışmaya katılan hastaların ürolojik olarak BPH, üriner sistem kanseri, idrar yolu enfeksiyonu, üriner inkontinans cerrahisi geçirmiş olması, nörolojik hastalık veya tutulum varlığı (Parkinson, Multipl skleroz gibi) ile 18 yaş altında olma dışlama kriteri olarak kabul edildi. Hastalara dermatoloji ve romatoloji kliniklerinde Türkçe validasyonu olan Behçet hastalığı anlık aktivite formu (minimum 0, maksimum 12 puan skorlamasına sahip) ile Behçet hastalığı aktivite durumları sorgulandı ve takip edildiği kliniklerde göz tutulumu, nörolojik tutulumu ve damar tutulumuna göre kategorize edildikten sonra üroloji polikliniğinde uluslararası prostat semptom skorlaması (IPSS) sorgulama formu ile üroflowmetri ve postvoiding rezidü ölçümlerine bakıldı. Demografik ve klinik bilgileri kayıt edildi.

Bulgular Hastaların ortalama yaşı 42.6 yıl idi. BH'nın ortalama aktivite skoru 4.6±3.2 ve ortalama IPSS skoru 7.3±7.3 idi. Cinsiyetin Behçet hastalığı anlık aktivite skoru üzerinde anlamlı bir etkisi yoktu. Behçet hastalığı anlık aktivite skoru ile IPSS skoru, gündüz idrara çıkma sıklığı, noktüri ve urgency arasında istatistiksel anlamlı bulgu saptandı. Ancak üroflowmetri parametreleri ile anlamlı bir ilişki saptanmadı.

Sonuç Sonuç olarak, nörolojik tutulum olmaksızın BH'de alt üriner sistem tutulumu, üroflowmetri parametrelerinden önce semptom skorları ile kendini gösterebilir.

Anahtar Kelimeler Behçet hastalığı, Alt idrar yolu semptomları, Üriner inkontinans, Noktüri, Aciliyet, Depolama semptomları

INTRODUCTION

Behçet's disease (BD), defined by Turkish dermatologist Hulusi Behçet and characterized by the symptom triad of oral aphthous ulcer, genital ulcer and uveitis, is a chronic systemic inflammatory disease of unknown etiology affecting the mucosa, skin, gastrointestinal tract, joints, blood vessels, neurological system and eyes(1,2). BD is endemic in the Middle East and Mediterranean region, as well as along the Silk Road to Central and East Asia, and is seen worldwide due to migration events(3,4). BD can be seen at any age and in both sexes. While BH is more common in women in countries such as the USA, Korea, Spain, Brazil, and Sweden, it is more common in men in countries such as Turkey, Germany, Iran, and Greece.⁵ The disease begins in the second decade of life, regardless of race or gender(6,7). Its prevalence has been reported between 20.8 and 35.7 per 100,000 in different countries(5).

Since Behçet's Disease is a multisystem disease, it affects all physiological systems, but oral aphthous ulcers are the most common symptom(1,4,8). Genital ulcers, ocular lesions, skin lesions and gastrointestinal, cardiac, vascular, neurological and pulmonary system involvement may also be seen. Involvement of the urogenital system manifests as urological problems such as epididymitis and sterile urethritis in addition to genital ulcers(9). Studies on lower urinary tract (LUT) involvement of BD are rare in the literature. Alizadeh et al.¹⁰ it was reported that the most common symptoms related to AUS are storage symptoms and incontinence. However, urinary symptoms and urinary retention may also occur. In this study, we aimed to evaluate the relationship between lower urinary tract symptoms (LUTS) and neurological involvement in patients with Behçet's disease.

MATERIAL and METHODS

In June 2019 to 2021, 56 male patients who applied to Pamukkale University rheumatology and dermatology outpatient clinics, were diagnosed with Behçet's disease according to the criteria of the international Behçet study group and accepted to participate in the study, were

subjected to urological evaluation. Behçet's disease activity status was questioned with the Turkish-validated Behçet's disease instant activity form (with a minimum score of 0, a maximum score of 12). In addition, eye involvement, neurological involvement, and vascular involvement were evaluated in the clinics where he was followed. Afterwards, international prostate symptom scoring (IPSS) questionnaire and uroflowmetry and postvoiding residual measurements were examined in the urology outpatient clinic. Demographic and clinical information of all patients were recorded.

For statistical evaluation, the tests to be used in comparisons were decided according to the central limit theorem. The data were evaluated using the SPSS 22.0 package program in computer, using descriptive statistics [median, IQR (interquartile range)] and analysis tests (Mann-Whitney U Test). It was considered statistically significant when $P < 0.05$.

RESULTS

The median age of 56 male patients who participated in the study was (IQR) 45 (16) years, the median duration of diagnosis of Behçet's disease was (IQR) 10.5 (9) years, and the median of instantaneous activity scores of Behçet's disease (min.0, max. 12 points) was (IQR) 8 (5). Since it was observed that all patients participating in the study did not have clinical neurological involvement, they were categorized according to eye and vascular involvement.

The basic demographic characteristics of the patients and their relationship with LUTS assessment and vascular involvement and eye involvement were examined in Table-1 and Table-2, respectively. Age and diagnosis times of Behçet's disease were found to be similar in patients with and without both involvement. Although Behçet's disease instantaneous activity scores and IPSS scores were found to be statistically significantly higher in patients with eye and vascular involvement, no similar situation was observed in uroflowmetry parameters.

Table 1. Evaluation of LUTS according to eye involvement in men with BD

	Vascular Involvement		P
	No	Yes	
Age (Year) [median (IQR)]	44.50 (17)	47 (10)	0.607
Behcet's Disease Diagnosis Time (Years) [median (IQR)]	11 (9)	10 (8)	0.918
Behcet's Disease Instant Activity Score [median (IQR)]	5 (5)	9.50 (4)	<0.001
IPSS Score [median (IQR)]	2 (7)	8.50 (16)	0.037
Qmax (ml/sn) [median (IQR)]	15.50 (6.30)	12.55 (13.80)	0.584
Voided Volume (ml) [median (IQR)]	258 (172)	219.5 (352)	0.784
PVR (ml) [median (IQR)]	0 (30)	0 (60)	0.358

PVR: Post-Void Residual Volume, IQR: Interquartile Range

DISCUSSION

According to studies on LUTS of BD, genitourinary system involvement mainly consists of genital ulcers, epididymitis, urethritis and cystitis (9,11). LUTS has been evaluated in terms of urological involvement in some studies investigating the activity index related to BD (12-14). Although BD affects the urogenital system, studies investigating LUT involvement are limited. In this study, we aimed to evaluate the relationship between lower urinary tract symptoms (LUTS) and neurological involvement in patients with Behçet's disease (BD). Although BD affects the urogenital system, studies investigating LUT involvement are limited. This study evaluates the relationship between BD and LUTS.

LUT involvement in BD has been investigated previously in a limited number of patients, mostly young-middle-aged men, with a few case reports and case series focusing on bladder involvement, and the most common symptoms were identified as storage symptoms.10 However, the relationship between neurological involvement and LUTS was not examined in these studies. Cetinel et al.15 reported that the prevalence of bladder involvement in BD was 0.07%. However, this study included patients who underwent 38% bladder augmentation and had severe bladder involvement. Another study involving 104 male patients from the same center showed that the frequency of LUTS ranged from 5.8% (difficulty urinating) to 30.8% (nocturia), and that storage symptoms were more common than voiding symptoms in patients with BD (16). Similarly, Erdogru et al.(17) reported more incontinence and irritative bladder symptoms in BD.

Self-healing ulcers or mass lesions resembling bladder tumors have been reported in cystoscopic exami-

Table 2. Evaluation of LUTS according to vascular involvement in men with BD

	Vascular Involvement		P
	No	Yes	
Age (Year) [median (IQR)]	46 (17)	44.50 (14)	0.894
Behcet's Disease Diagnosis Time (Years) [median (IQR)]	11 (11)	10 (14)	0.423
Behcet's Disease Instant Activity Score [median (IQR)]	5 (8)	9 (4.50)	<0.001
IPSS Score [median (IQR)]	2 (5)	10 (14)	0.002
Qmax (ml/sn) [median (IQR)]	15.50 (8.72)	12.80 (14.35)	0.371
Voided Volume (ml) [median (IQR)]	241.50 (153.25)	270.0 (447.25)	0.508
PVR (ml) [median (IQR)]	0 (30)	0 (30)	0.262

PVR: Post-Void Residual Volume, IQR: Interquartile Range

nation of the bladder in BD (10,15,16). These lesions are usually related to vasculitis.10 It was revealed that the most common urodynamic finding in BD is detrusor overactivity (15). Since the aim of our study was to evaluate the relationship between BD and LUTS, we did not perform these invasive tests on any of our patients. This relationship was evaluated using symptom scores and questionnaires and presented as a contribution to the literature.

Ocular, neurological and vascular involvement are considered to be the main causes of morbidity and mortality in BD. Male patients are affected more frequently and more seriously by these organ symptoms (18). Neurological involvement, which is reported in 5% to 10% of BD, may also involve the brain stem (10,19). Therefore, involvement of the pontine voiding center has been suggested as the cause of LUTS in BD. Cetinel et al. (5) of the patients (62.5%) had neurologic involvement (15). In our study, there was a significant difference in favor of LUTS findings in patients with eye involvement without neurologic involvement. In addition, this situation was valid for those with vascular involvement.

CONCLUSION

In conclusion, lower urinary tract involvement in BD without neurological involvement is manifested by symptom scores before uroflowmetry parameters.

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Ethics Committee: This study was approved by Pamukkale University Clinical Research Ethics Committee (60116787-020/17766).

REFERENCES

1. Bang D. Clinical spectrum of Behçet's disease. *J Dermatol.* 2001;28:610-3.
2. Behçet H. Über rezidivierende Aphthosen, durch ein Virus verursachte Geschwüre am Mund, am Auge und an den Genitalien. *Dermatol Monatsschr.* 1937;(36):1152-7.
3. Bang D, Yoon KH, Chung HG, Choi EH, Lee ES, Lee S. Epidemiological and clinical features of Behçet's disease in Korea. *Yonsei Med J.* 1997;38:428-36.
4. Davatchi F. Behçet's disease. *Int J Rheum Dis.* 2018;21:2057-8.
5. Davatchi F. Behçet's disease. *Int J Rheum Dis.* 2014;17:355-7.
6. Mahr A, Maldini C. Épidémiologie de la maladie de Behçet [Epidemiology of Behçet's disease] *Rev Med Interne.* 2014;35:81-9.
7. Zouboulis CC. Epidemiology of Adamantiades-Behçet's disease. *Ann Med Interne (Paris)* 1999;150:488-98.
8. International Team for the Revision of the International Criteria for Behçet's Disease (ITR-ICBD) The International Criteria for Behçet's Disease (ICBD): a collaborative study of 27 countries on the sensitivity and specificity of the new criteria. *J Eur Acad Dermatol Venereol.* 2014;28:338-47.
9. Kirkali Z, Yigitbasi O, Sasmaz R. Urological aspects of Behçet's disease. *Br J Urol.* 1991;67:638-9.
10. Alizadeh F, Khorrami MH, Izadpanahi MH, Nouri-Mahdavi K, Mohammadi Sichani M. Bladder involvement in Behçet's disease. *Urol J.* 2012;9:347-50.
11. Sarica K, Süzer O, Gürler A, Baltacı S, Özdiğer E, Dinçel C. Urological evaluation of Behçet patients and the effect of colchicine on fertility. *Eur Urol.* 1995;27:39-42.
12. Davatchi F, Akbaran M, Shahram F, Jamshidi A, Gharibdoost F, Chams C. Iran Behçet's disease dynamic activity measure. *Hung Rheumatol Suppl.* 1991;32:1340.
13. Krause I, Rosen Y, Kaplan I, et al. Recurrent aphthous stomatitis in Behçet's disease: clinical features and correlation with systemic disease expression and severity. *J Oral Pathol Med.* 1999;28:193-6.
14. Suzuki Kurokawa M, Suzuki N. Behçet's disease. *Clin Exp Med.* 2004;4:10-20.
15. Cetinel B, Akpınar H, Tüfekçi I, Uygun N, Solok V, Yazıcı H. Bladder involvement in Behçet's syndrome. *J Urol.* 1999;161:52-6.
16. Cetinel B, Obek C, Solok V, Yaycıoğlu O, Yazıcı H. Urologic screening for men with Behçet's syndrome. *Urology.* 1998;52:863-5.
17. Erdoğan T, Koçak T, Serdaroğlu P, Kadioğlu A, Tellağlı S. Evaluation and therapeutic approaches of voiding and erectile dysfunction in neurological Behçet's syndrome. *J Urol.* 1999;162:147-53.
18. Akkoç N. Update on the epidemiology, risk factors and disease outcomes of Behçet's disease. *Best Pract Res Clin Rheumatol.* 2018;32:261-70.
19. Davatchi F, Shahram F, Chams-Davatchi C, et al. Behçet's disease: from East to West. *Clin Rheumatol.* 2010;29:823-33.