

# A Rare Cause of Lower Urinary Tract Infection in Behçet's Disease: Chronic Prostatitis Caused by *Achromobacter xylosoxidans*

## Behçet Hastalığında İdrar Yolu Enfeksiyonunun Nadir Bir Nedeni: *Achromobacter xylosoxidans*'a Bağlı Bir Kronik Prostatit Olgusu

İsmail SARI, MD,<sup>a</sup>  
Servet AKAR, MD,<sup>a</sup>  
Tuba ATAY, MD,<sup>b</sup>  
Güven ASLAN, MD,<sup>c</sup>  
Nurullah AKKOÇ, MD<sup>a</sup>

Departments of <sup>a</sup>Internal Medicine,  
<sup>b</sup>Microbiology, <sup>c</sup>Urology,  
Dokuz Eylül University  
School of Medicine, İZMİR

Geliş Tarihi/Received: 13.05.2007  
Kabul Tarihi/Accepted: 03.12.2007

Yazışma Adresi/Correspondence:  
İsmail SARI, MD  
Dokuz Eylül University  
School of Medicine,  
Department of Internal Medicine,  
İZMİR  
ismailsari35@gmail.com

**ABSTRACT** Behçet's disease (BD) is a multisystem vasculitis of unknown etiology characterized mainly by recurrent oral aphthous ulceration, genital ulceration, skin lesions and uveitis. Urogenital manifestations other than genital ulceration are rare. We report a case of chronic bacterial prostatitis in a patient with BD receiving immunosuppressive treatment. The causative pathogen was *Achromobacter xylosoxidans* (*A. xylosoxidans*). This organism is opportunistic and usually affects immunocompromised hosts. Clinically reported prostatitis due to *A. Xylosoxidans* is extremely rare.

**Key Words:** Behcet syndrome; achromobacter denitrificans

**ÖZET** Behçet hastalığı etyolojisi bilinmeyen, birden fazla sistemi tutabilen, tekrarlayan ağız aftları, genital ülser, cilt tutulumu, kas iskelet sistemi bulguları ve üveit ile karakterize vaskülitik bir sendromdur. Genital ülser dışındaki ürogenital sistem bulguları oldukça nadirdir. Bu olgu sunumunda Behçet hastalığı nedeniyle immünsupresif tedavi alan bir hastada gelişen kronik bakteriyel prostatitli bir hastayı rapor ediyoruz. Etken mikroorganizma olan *Achromobacter Xylosoxidans* kronik prostatitin oldukça nadir görülen fırsatçı etkenlerinden birisi olup, genellikle immün direnci azalmış kişilerde hastalığa neden olmaktadır.

**Anahtar Kelimeler:** Behçet sendromu; achromobacter denitrificans

Türkiye Klinikleri J Dermatol 2008;18:212-214

Behçet's disease (BD) is a multisystem vasculitis of unknown etiology characterized mainly by recurrent oral aphthous ulceration, genital ulceration, skin lesions and uveitis.<sup>1</sup> Urogenital manifestations other than genital ulceration are rare. However, epididymitis and sterile urethritis have been reported in 6% and 3% of male patients respectively.<sup>2</sup> Although, an increased prevalence of prostatitis in patients with BD have been reported in one study,<sup>3</sup> there is a considerable lack of evidence concerning an increased urinary tract infections (UTIs).

We report a case of chronic bacterial prostatitis (CBP) in a patient with BD caused by a Gram negative rod bacteria named *Achromobacter xylosoxidans* (*A. xylosoxidans*). This organism is opportunistic and usually affects immunocompromised patients.<sup>4</sup> It has been shown to cause many infections including peritonitis, chronic otitis media, lung abscess<sup>5</sup> but reported UTIs with this microorganism are extremely rare.<sup>5-7</sup>

## CASE REPORT

A 42 year old man presented with 3 months history of urinary tract symptoms (UTS), including frequency, urgency, dysuria, nocturia, hesitancy, incomplete emptying of the bladder and urinary incontinence. He was diagnosed as BD 10 years ago according to the oral and genital ulcers, superficial vein thrombosis, and positive pathergy test. He had been on aspirin (ASA) 100mg/day, azathioprine (AZA) 150mg/day and low dose oral prednisolone which had been started 6 months ago for intractable genital ulcers and thrombophlebitis. He was otherwise in good health and denied any systemic complaints. He had an increased C-reactive protein level of 30.04 mg/L. Urinalysis revealed 3-4 leucocytes per high-power field (HPF) but no microorganisms could be isolated from urine cultures. Abdominopelvic ultrasonography, urodynamic evaluation were normal. On digital rectal examination, the prostate was tender. Microscopic examination of the expressed prostatic secretions showed Gram negative rods and approximately 15-16 leukocytes per HPF. Cultures of urethral urine, midstream urine were negative but prostatic secretions obtained by massage yielded heavy growth of *A. xylosoxidans*. Susceptibility study showed that the strain was susceptible to ceftazidime, ciprofloxacin, imipenem, and was resistant to cefotaxime, amikacin and gentamicin. The patient was started on ciprofloxacin (500 mg bid) for 6 weeks. In the follow up, cultures of the prostatic secrets turned negative and clinical improvement was achieved.

## DISCUSSION

In this report we presented a case of CBP in a patient with BD. The patient was on low dose oral corticosteroid (5 mg/day), AZA and ASA treatments which had been started for the recurrent mucocutaneous lesions and superficial thrombophlebitis. AZA (2.5 mg/kg daily p.o.) has been found to be effective in preventing mucocuta-

neous lesions and thrombophlebitis in addition to ocular inflammation and arthritis in a randomised, double-blind and placebo controlled study.<sup>8</sup> Besides, corticosteroids may be effective in almost all mucocutaneous lesions.<sup>9</sup> The glucocorticosteroids may affect many aspects of the host defense especially the cellular defense mechanisms.<sup>10</sup> The incidence of infectious complications rises with increasing daily doses given for more than 4 weeks.<sup>11</sup> Despite cell-mediated immunity seems not playing an essential role in host defense of UTIs,<sup>12</sup> it has been shown that steroid administration increases the incidence of UTIs and promotes the incidence of UTIs caused by opportunistic pathogens.<sup>12</sup> On the other hand, AZA causes suppression of both cell-mediated and humoral immunity and the combination of AZA with steroids increases the risk of opportunistic infections.<sup>11</sup> The presence of lower UTS (mainly irritative) were reported to be higher than healthy controls in patients with Behçet's.<sup>13</sup> However, it is still unclear whether the incidences of UTIs in these patients are increased. There is only one report revealing a high prevalence of prostatitis in BD,<sup>3</sup> but the number of patients in this study was too small to draw conclusions.

*A. xylosoxidans* is an aerobic, nonfermentative, Gram negative rod which is rarely isolated from clinical material. This organism is opportunistic and usually affects severely immunocompromised patients.<sup>4</sup> Clinical infections due to *A. xylosoxidans* have been reported in the literature only as isolated case reports or in small series.<sup>5</sup> To our knowledge there are only 3 reported cases of prostatitis caused by *A. xylosoxidans*: 2 of these cases were reported in patients with unilateral non-gonorrhoeal epididymitis<sup>6</sup> and the other reported case was associated with prostatic adenocarcinoma.<sup>5</sup>

In conclusion, CBP should not be overlooked in Behçet's patients. Sometimes they can be due to unusual microorganisms because of immunosuppressive agents used in BD.

## REFERENCES

1. Yurdakul S, Hamuryudan V, Yazici H. Behçet syndrome. *Curr Opin Rheumatol* 2004;16:38-42.
2. Kirkali Z, Yigitbasi O, Sasmaz R. Urological aspects of Behçet's disease. *Br J Urol* 1991;67:638-9.
3. Ek L, Hedfors E. Behçet's disease: a review and a report of 12 cases from Sweden. *Acta Derm Venereol* 1993;73:251-4.
4. Weitkamp JH, Tang YW, Haas DW, Midha NK, Crowe JE Jr. Recurrent *Achromobacter xylosoxidans* bacteremia associated with persistent lymph node infection in a patient with hyperimmunoglobulin M syndrome. *Clin Infect Dis* 2000;31:1183-7.
5. Igra-Siegman Y, Chmel H, Cobbs C. Clinical and laboratory characteristics of *Achromobacter xylosoxidans* infection. *J Clin Microbiol* 1980;11:141-5.
6. Tozzo PJ. Semen analysis in unilateral epididymitis. *N Y State J Med* 1968;68:2769-70.
7. Tsay RW, Lin LC, Chiou CS, Liao JC, Chen CH, Liu CE, et al. *Alcaligenes xylosoxidans* bacteremia: clinical features and microbiological characteristics of isolates. *J Microbiol Immunol Infect* 2005;38:194-9.
8. Yazici H, Pazarli H, Barnes CG, Tüzün Y, Ozyazgan Y, Silman A, et al. A controlled trial of azathioprine in Behçet's syndrome. *N Engl J Med* 1990;322:281-5.
9. Fresko I, Yurdakul S, Hamuryudan V, Ozyazgan Y, Mat C, Tanverdi MM, et al. The management of Behçet's syndrome. *Ann Med Interne (Paris)* 1999;150:576-81.
10. Rubin RH. Immunosuppressive drugs. In: Rubin RH, Young LS, eds. *Clinical Approach to Infection in the Compromised Host*. 4th ed. Hingham, MA, USA: Kluwer Academic Publishers. 2002; p.27-8.
11. Greenberg SB. Infections in the immunocompromised rheumatologic patient. *Crit Care Clin* 2002;18:931-56.
12. Ludwig E. Urinary Tract Infections in Patients on Glucocorticosteroid Therapy. In: Bergan T, Ed. *Urinary Tract Infections Infectiology*. Switzerland Basel: Karger; 1997:52-6.
13. Cetinel B, Obek C, Solok V, Yaycioglu O, Yazici H. Urologic screening for men with Behçet's syndrome. *Urology* 1998;52:863-5.