BEHÇET HASTALIĞI MUKOKUTANÖZ BELİRTİLER VE TEDAVİSİ

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Behçet Hastalığı (BH)

- Tanım:

1. ROÜ
2. GÜ
3. Üveit
4. Sistemik: Artiküler, vasküler, GI, nörolojik ve kardiyo-pulmoner vb.

Behçet H. Uber rezidivierende aphthouse durch ein virus verursachte Geschwuere am Mund, am Auge und an den Genitalien.Dermatol Monatsschr Wochenschr 1937; **105**: 1152–1157.

Epidemiyoloji:

- Genç bireyler, 20–40 yaş, en sık etkilenir
- E/K oranı genellikle 1 : 1
- İpek yolu boyunca yerleşen ülkelerde en sık prevalans (1/10,000 and 1/1,000)

Tursen U, Gurler A, Boyvat A. “Evaluation of clinical findings according to sex 2313 Turkish patients with Behcet’s disease.” Int. J. Dermatol., 2003; **42**: 346-351

Clinical features and natural course of Behçet's disease in 661 cases: a multicentre study

E. Alpsoy, L. Donmez,* M. Onder,† S. Gunasti,‡ A. Usta,§ Y. Karincaoglu,¶ B. Kandi,** S. Buyukkara, O. Keseroglu,† S. Uzun,‡ U. Tursen,§ M. Seyhan¶ and A. Akman

British Journal of Dermatology 2007

Conclusions Mucocutaneous lesions are the hallmarks of the disease, and especially oral ulcers precede other manifestations. The increase in clinical severity score is more pronounced in patients without regular treatment and follow-up. Male sex and a younger age at onset are associated with more severe disease.

Prognoz:

- Göz ve SSS tutulumu en temel prognostik faktörler
- KVS, AC ve GiS tutulumları en sık mortalite nedenleri

Gurler A, Boyvat A, Tursen U. Clinical manifestations of Behcet's disease: an analysis of 2147 patients.Yonsei Med. J., 1997; **38**: 423-7

Evaluation of clinical findings according to sex in 2313 Turkish patients with Behçet's disease

Umit Tursen, MD, Aysel Gurler, MD, and Ayse Boyvat, MD

International Journal of Dermatology 2003, **42**, 346–351

Conclusions Only genital aphthae and erythema nodosum were more frequent in females. On the other hand papulopustular eruptions, thrombophlebitis, ocular, neurologic, pulmonary and vascular involvement were more frequent in males. While female patients had the best prognosis, male patients had a worse overall prognosis than females.

Etiyoloji:

- Genetik yatkınlık (HLA-B51)
- İnfeksiyonlar (Streptokokus)
- İmmunolojik disfonksiyonlar (Th1/17)

Türsen Ü. Pathophysiology of the Behçet's Disease. *Pathology Research International*. 2012;2012:493015. doi:10.1155/2012/493015

Association of class I HLA antigens with the clinical manifestations of Turkish patients with Behçet's disease

T. I. Kaya, U. Tursen, A. Gurler* and H. Durt

HLA-B51 and the absence of HLA-B35 can be regarded as laboratory risk factors of venous thrombosis in patients with Behçet's disease.

2002 Blackwell Science Ltd • *Clinical and Experimental Dermatology*, **27**, 498–501

Genetic mutations and polymorphisms

Umit Tursen · Tamer Irfan Kaya · Gulcin Eskandari
Ozgur Gunduz · Müjde Yazar · Guliz Ikizoglu
Ugur Atik

Association of factor V Leiden and prothrombin gene mutation with Behçet's disease

Arch Dermatol Res (2001) 293 : 537–539

Association of the platelet glycoprotein Ia C807T/G873A gene polymorphism and thrombosis in Behçet patients

GÜRBÜZ POLAT [1,*], GÜLÇIN ESKANDARI [1], TAMER IRFAN KAYA [2], ÜMIT TÜRSEN [2], ÖZLEN BAGDATOGLU [1], GÜLIZ IKIZOGLU [2] and UGUR ATIK [1] *Haematologia*, Vol. 32, No. 2, pp. 121–128 (2002)

Umit Tursen · Lulufer Tamer · Gulcin Eskandari
Tamer Irfan Kaya · Nurcan Aras Ates · Guliz Ikizoglu
Ugur Atik

Glutathione S-transferase polymorphisms in patients with Behçet's disease

Arch Dermatol Res (2004) 296: 185–187

N-acetyltransferase 2 polymorphisms in patients with Behcet's disease

L. Tamer, U. Tursen,* G. Eskandari, N. A. Ates,† B. Ercan, H. Yildirim and U. Atik

2005 Blackwell Publishing Ltd • *Clinical and Experimental Dermatology*, **30**, 56–60

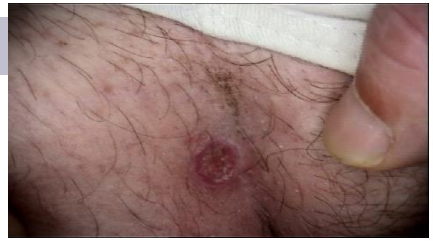
Cytochrome P450 polymorphisms in patients with Behcet's disease

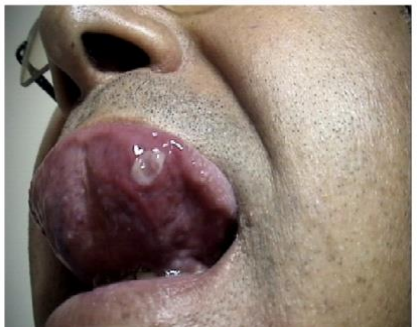
Umit Tursen, MD, Lulufer Tamer, PhD, Hale Api, MD, Hatice Yildirim, PhD, Kiymet Baz, MD, Guliz İkizoglu, MD, and Ugur Atik, PhD

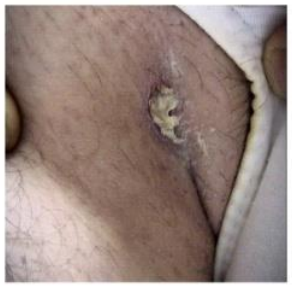
International Journal of Dermatology 2007, **46**, 153–156

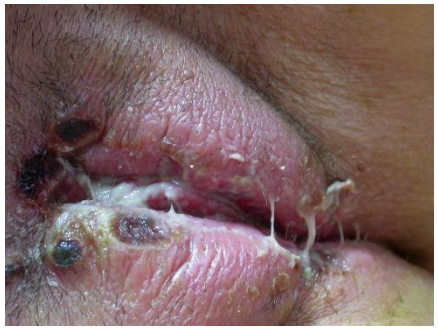
Klinik Bulgular

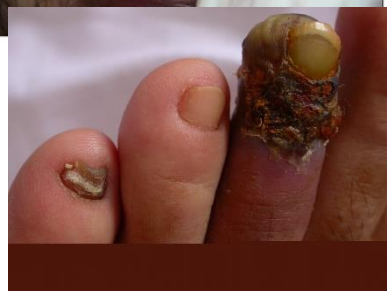
Mukokutanöz lezyonlar



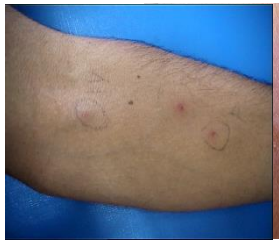


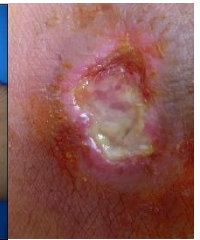






1. **OÜ: Minör (%80), majör, herpetiform**
2. **GÜ: %80-90, skarlar tanısal, LAP, ağrı**
3. **EN-benzeri lezyonlar**
4. **PPE**
5. **Yüzeyel tromboflebit**
6. **Paterji testi**
7. Diğer: Ekstragenital ülserler (İnguinal, aksilla, perianal, meme altı), Sweet send, piyoderma gangrenosum, LCV, EM-benzeri, pernio-benzeri, PAN-benzeri, gerçek arteriyel lezyonlar, subungual infarktlar





Sistemik belirtiler

- Oküler: Anterior ve posterior üveit, retinal vaskülit
- Kas-iskelet: Artralji, artrit, osteonekroz, miyozit
- Vasküler: DVT, arteriyel oklüzyon ve anevrizma
- SSS: Santral motor parezi, beyin sapı ve serebellar belirtiler.
- GiS: En sık özefagus, terminal ileum, kolon ve rektumda ülserler.
- AC: Pulmoner arteriyal anevrizma, infarkt, hemoraji, plevral efüzyon, fokal veya diffüz fibrosis.
- Kalp: Valvuler lezyonlar, miyokardit, endomiyokardiyal fibrosis, perikarditis, intrakardiyak tromboz, koroner vaskülit ve ventriküler anevrizmalar.

Yonsei Medical Journal
Vol. 38, No. 6, pp. 423~427, 1997

Clinical Manifestations of Behçet's Disease: An Analysis of 2147 Patients

Aysel Gürler, Ayşe Boyvat, and Ümit Türsen

To evaluate the prevalence of the clinical findings in Behçet's disease, we retrospectively analyzed the clinical data of 2147 Behçet patients from 9 to 87 years of age (mean age 38.3 years) followed up during the years 1976 through 1997. One thousand ninety three patients were male and 1054 patients were female. The male/female ratio was 1.03. The mean age at onset was 25.6 years. A family history of Behçet's disease was present in 7.3 % of the patients. Positive pathergy was found in 1220 (56.8%) patients. All of the patients had mucocutaneous lesions. Out of the 2147 patients the disease manifested itself as only mucocutaneous involvement in 1168 patients. The prevalence of systemic manifestations was found as follows: 28.9% ocular involvement, 16.0% musculoskeletal involvement, 16.8% vascular involvement, 2.8% gastrointestinal involvement, 2.2% neurological involvement. Pulmonary involvement was seen in 20 (1.0%) patients, cardiac involvement was seen in 3 patients and renal involvement was observed in 2 patients. Male patients had vascular involvement 5.02, neurologic involvement 2.21 and ocular involvement 1.98 times more frequently than female patients.

Tanı

- Tamamen klinik tanı.
- BH Uluslararası çalışma grubu (ISG) yeni tanı kriterleri.
- ROÜ + en az 2 kriter;
- Göz tutulumu, GÜ, EN-benzeri lezyonlar ve PPE, paterji testi pozitifliği

Table 2 The older and newer criteria for the diagnosis of Behçet disease

ISG criteria for the diagnosis of Behçet disease[80]	
Recurrent oral ulceration:	Minor aphthous, major aphthous, or herpetiform ulcers observed by the physician or patient, which have recurred at least three times over a 12-month period
Plus any 2 of the following:	
Recurrent genital ulceration:	Aphthous ulceration or scarring observed by the physician or patient
Eye lesions:	Anterior uveitis, posterior uveitis, or cells in the vitreous on slit-lamp examination; or retinal vasculitis detected by an ophthalmologist
Skin lesions:	Erythema nodosum observed by the physician or patient, pseudofolliculitis, or papulopustular lesions; or acneiform nodules observed by the physician in postadolescent
Positive pathergy test:	Test interpreted as positive by the physician at 24-48 hr
These criteria are valid in the absence of other clinical explanation	
International criteria for Behçet disease point score system: scoring ≥ 4 indicates Behçet diagnosis[112]	
Sign/symptom	**Points**
Oral aphthosis	2
Genital aphthosis	2
Ocular lesions	2
Skin lesions	1
Neurologic manifestations	1
Vascular manifestations	1
Positive pathergy test[a]	1[a]

TEDAVİ

- BH değişik belirtilerinin tedavisi hala **tartışmalıdır.**

1. Durumun heterojenitesi
2. Güvenli laboratuvar belirteçlerin eksikliği
3. RKÇ eksikliği

Kanıta Dayalı Tıp Tedavisi

- RKÇ

Global Journal of Dermatology & Venereology, 2014, 2, 27-49

Treatment Options in Behcet's Disease

Ümit Türsen[1,*] and Belma Türsen[2]

Kolşisin

- 1975’ ten beri BH için kullanılıyor.
- İlk RKÇ 1980 yılında.
- 6 ay sonunda EN–benzeri lezyon ve artralji azalması.

A double blind study of **colchicine** in Behçet's disease. Haematologica. **1980**;65(3):399-402.

- Diğer çift-kör bir çalışmada Cyc' den etkisiz.
- Son KÇ (2-yıl çift-kör);
- **GÜ, EN ve artritte kadınlarda, erkeklerde sadece** artritte etkili.

Arthritis Rheum. 2001;44(11):2686-92. A double-blind trial of colchicine in Behçet's syndrome.

ments.[6] Therefore we believe that the low frequency of ocular and neurologic involvement in our patients may be result of the beneficial effect of the colchicine therapy we initiated at the time of diagnosis, early in the course of the disease. The

Report

Evaluation of clinical findings according to sex in 2313 Turkish patients with Behçet's disease

Umit Tursen, MD, Aysel Gurler, MD, and Ayse Boyvat, MD

International Journal of Dermatology 2003, **42**, 346–351

Azatiyopirin:

- 2 mg/kg/gün göz tutulumunda 2 yıl boyunca etkili.
- **OGÜ ve artrit belirtilerinde faydalı.**
- DVT önleme kapasitesi var.

- Entero- ve nöro-Behçet’ te etkili.
- Steroidden kurtarıcı ajan.
- Erken dönem AZA başlanması uzun dönem prognozda faydalı.

Siklosporin

- Retinal vaskülit gibi şiddetli göz tutulumlarında ilk tercih.
- Hem göz hem de MK lezyon ataklarını önler.
- Uzun dönemde SSS ve renal toksisite!!!

Masuda K, Nakajima A, Urayama A, Nakae K, Kogure M, Inaba G.
Lancet. 1989 May 20;1(8647):1093-6.

Talidomid

- 24 haftalık çalışmada OGÜ ve PPE tedavisinde etkili.
- Rekürrens kesilince kaçınılmaz!!!
- Kolit? EN kötüleşmesi? !!!

Hamuryudan V, Mat C, Saip S, Ozyazgan Y, Siva A, Yurdakul S, Zwingenberger K, Yazici H. Ann Intern Med. 1998;128(6):443-50.

- Nöro-BH, **piyoderma gangrenozum**, üveit ve GiS ülserlerinde de etkili.
- Özellikle doğurganlık çağında **kadınlarda** MK lezyonlar için **ilk tercih olmamalı !!!**
- **Lenalidomid** (anti–TNF-α ve anti-IL-6) dirençli kompleks aftosis te etkili.

Green J, Upjohn E, McCormack C, Zeldis J, Prince HM. Br J Dermatol. 2008;158(1):197-8

NSAİİ

- Azapropazon, 300 mg x3/gün, akut artritte etkisiz olup, ilk hafta için analjezi sağlar.
- Oral indometazin 25 mg x 4/ gün 3 ay kullanıldığında eklem şikayetlerinde faydalı.

Moral F, Hamuryudan V, Yurdakul S, Yazici H. Clin Exp Rheumatol. 1995;13(4):493-5.

İnterferon

- IFN-α-2a, s.c., 6 MIU haftada 3 kez**, OGÜ ve PPE sayısını anlamlı azaltır.**
- Açık çalışmalarda, IFN-α (3-6 MIU) şiddetli arka üveitte etkili

Azizlerli G, Sarica R, Köse A, Ovül C, Kavala M, Kayabali M, Erkan F, Kural Z. Dermatology. 1996;192(3):239-41.

- Kontrolsüz çalışmalara göre, IFN hem **oküler hem de ekstraoküler belirtileri** (nörolojik, artiküler), azaltıp, uzun süreli remisyon sağlayabilir.
- Yüksek maliyet ve sık YE (AZT ile birlikte miyelo-supresyon, depresyon veya psikoz) yaygın kullanımını kısıtlar.

Alpsoy E, Yilmaz E, Başaran E. J Am Acad Dermatol. 1994;31(4):617-9.

Anti-TNF ajanlar

- Etanersept RKÇ' ya göre MK-BH' ında etkili (**OGÜ, PPE, artrit**, Paterjiye etkisiz), olgu bildirilerinde göz tutulumu ??
- Diğer bir RKÇ' da ise MK-BH' ında etkisiz, bu olgular sonrasında IFX tedavisine yanıt verebilmiştir.

Melikoglu M, Fresko I, Mat C, Ozyazgan Y, Gogus F, Yurdakul S, Hamuryudan V, Yazici H. J Rheumatol. 2005;32(1):98-105
Estrach C, Mpofu S, Moots RJ. Rheumatology (Oxford). 2002;41(10):1213-4.

- **İFX** geleneksel immunosupresiflere dirençli olgularda artrit, göz, GiS, nörolojik ve vasküler tutulumda kullanılması tavsiye edilen biyolojik ???
- **Adalimumab:** Çoğu olgu bildirisi olmak üzere **göz tutulumu (FDA onaylı)**, **alt ekstremite ülserleri**, **GÜ,** serebral vaskülit, GIS, **venöz tromboz da etkili.**
- Golimumab diğer anti-TNF' lere dirençli hastalarda üveitte etkili ??
- Yüksek maliyet ve YE' ler endişe kaynağı !!!

Guzelant G, Ucar D, Esatoglu SN, Hatemi G, Ozyazgan Y, Yurdakul S, Seyahi E, Yazici H, Hamuryudan V. Clin Exp Rheumatol. 2017;35 Suppl 108(6):86-89.
Fujikawa K, Endo Y, Mizokami A, Takahashi K, Tabuchi M, Ohba K, Nakamura H, Kawakami A. Intern Med. 2016;55(10):1375-8
Mesquida M, Victoria Hernández M, Llorenç V, Pelegrín L, Espinosa G, Dick AD, Adán A. Ocul Immunol Inflamm. 2013;21(2):160-2

Kortikosteroidler

- Depo KS (40 mg MP asetat her 3 haftada 1), Puls MP 1g/g 3 gün,sonra prednizon1mg/kg/g) MK-BH için etkili
- Kadınlarda **EN ataklarını önler**.
- EULAR şiddetli sistemik BH ataklarının erken fazında kısa süreli kullanılmasını tavsiye eder.
- **Topikal KS**, **OGÜ başlangıç fazı**, dirençli lezyonlarda IL KS, ön üveitte optalmik KS damla önerilir

Mat C, Yurdakul S, Uysal S, Gogus F, Ozyazgan Y, Uysal O, Fresko I, Yazici H. Rheumatology (Oxford). 2006;45(3):348-52
Hirohito S. Nat Clin Pract Rheumatol. 2006;2(7):358-9.

Dapson

- 12-aylık RKÇ (100 mg/gün) MK-BH **(OÜ, PPE, EN, Paterji)** etkili.

Sharquie KE, Najim RA, Abu-Raghif AR. J Dermatol. 2002;29(5):267-79.

Convit J, Goihman-Yahr M, Rondón-Lugo AJ. Br J Dermatol. 1984;111(5):629-30

Diğer İlaçlar

- Klorambusil (Göz, SSS)
- Siklofosfamid (**Vasküler=VCSS**, Budd-Chiari send, **nörolojik, gözde KE-EULAR**)
- Metotreksat (Göz, SSS, **MK-BH**)
- Antibiyotik (Benzatin penisilin, minosiklin, azitromisin, eritromisin)
- Pentoksifilin (Göz, **iskemik bacak ülserleri)**
- Levamizol (**OGÜ**, artrit, ve üveit)
- Takrolimus (Oküler, GI BH)
- Mikofenolat mofetil **(MK-BH** ve nörolojik)

- GM-CSF **(GÜ)**
- Granülosit ve monosit adsorpsiyon aferezi **(Ağrılı OGÜ** ve oküler-BH)
- İVİG (Oküler-BH)
- Oral laktobasil ve düşük doz doğal insan IFN' u-içeren pastiller **(OÜ)**
- Pimekrolimus krem **(GÜ, ağrı giderici**)

Pimecrolimus versus placebo in genital aphthous ulcers of **Behcet**'s disease: a randomized double-blind controlled trial.
Chams-Davatchi C, Barikbin B, Shahram F, Nadji A, Moghaddassi M, Yousefi M, Davatchi F.
Int J Rheum Dis. 2010;13(3):253-8.

Randomized trial of **pimecrolimus** cream plus colchicine tablets versus colchicine tablets in the treatment of genital ulcers in Behçet's disease.
Köse O, Dinç A, Simşek I.Dermatology. 2009;218(2):140-5.

- Antikoagülasyon ted: DVT, SVO, arteriyel?
- Rebamipid, benzidamin hidroklorid gargara, Amlexanox 5% oral macun, topikal PG-E2 jel, klorhekzidin jel, triklosan, tetrasiklin ve minosiklin gargara, NdYag lazer, topikal anestetikler, anti-mikrobiyal gargaralar, çinko sülfat **(OÜ)**
- Sükralfat: **OGÜ**
- Cerrahi (GI, Vasküler)

Alpsoy E, Er H, Durusoy C, Yilmaz E. Arch Dermatol. 1999;135(5):529-32
Kudur MH, Hulmani M. Indian J Dermatol. 2013;58(5):352-4.
Oral Surg Oral Med Oral Pathol Oral Radiol. 2016 Mar;121(3):269-73

Journal of Dermatological Treatment (2003) 14, 1–4
 ISSN 0954-6634

Taylor&Francis healthsciences

Severe erythema nodosum due to Behçet's disease responsive to erythromycin

T Irfan Kaya[1], U Tursen[1], K Baz[1], G Ikizoglu[1] and D Dusmez[2]

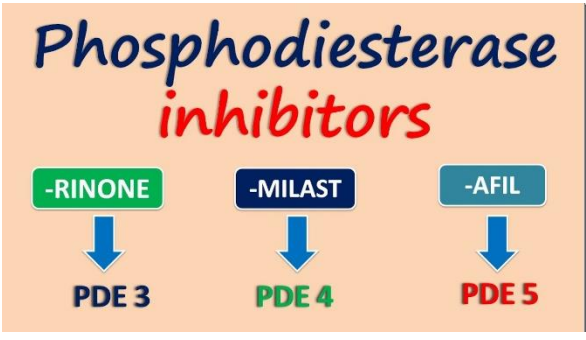
Departments of [1]Dermatology and [2]Pathology, Faculty of Medicine, Mersin University, Mersin, Turkey

A patient with severe erythema nodosum due to Behçet's disease is reported on here. Erythema nodosum lesions did not respond to classical treatments; however, they cleared after erythromycin treatment, which was prescribed for the treatment of coincidental erythrasma. Erythromycin treatment appears to be an effective treatment option in erythema nodosum. The hypothetical anti-inflammatory effects of erythromycin, besides its antibiotic properties, are reviewed and discussed to explain such a clinical improvement. (*J Dermatol Treat* (2003) **14**: 1–4)

- N Engl J Med. 2015 Apr 16;372(16):1510-8.
- **Apremilast** (30 mg/günde 2 kez 12 haftalık)**; RKÇ OÜ' de etkili.**

Hatemi G, Melikoglu M, Tunc R, Korkmaz C, Turgut Ozturk B, Mat C, Merkel PA, Calamia KT, Liu Z, Pineda L, Stevens RM, Yazici H, Yazici Y.

FDA Onayı: Apremilast (*Otezla*) BH OÜ !!!! Temmuz 22, 2019



Diğer biyolojikler

- Rituksimab: Göz
- Gevokizumab (Göz), Canakinumab (anti-IL-1β): Göz, GIS, **OGÜ,** SSS, vasküler
- Anakinra: **OGÜ** + GI + artiküler-BH
- Tokilizumab (anti-IL6, reküren meningo-ensefalit ve üveit)

Tedavi Sonuç:

- Üveit, OGÜ ve artritte genel olarak kanıta dayalı tedavi var.
- Diğer organ tutulumu tedavisi (damar, SSS ve GİS) ise genel olarak uzman yorumuna dayalı.

Kerstens FG, Turkstra F, Atalay S, van Vugt RM, Swearingen CJ, Yazici Y. Clin Exp Rheumatol. 2017;35 Suppl 108(6):55-59

Manifestations	Treatments
Oral apthae	1st line: Topical triamcinolone acetonide, prednisolone, amlexonax, anti-inflammatory rinses, topical anaesthetics 2nd line: Topical sucralfate, aminosalicylic acid, caustic solutions, oral tetracycline solutions, colchicine, levamisole, thalidomide, pulse methyl prednisolone, intralesional trimcinolone acetonide 3rd line: Cyclosporine, azathiopurine, methotrexate, chlorambucil, infliximab, etanercept, plasmapheresis-apheresis, zinc sulphate, penicilline, azithromycin, minocycline, dapsone, pentoxifylline, interferon-α
Genital ulcers	1st line: Topical triamcinolone acetonide, sucralfate, oral colchicine, azathiopurine, dapsone, prednisolone 2nd line: Levamisole, interferon-α, methotrexate, thalidomide, cyclosporine A
Papulopustular eruptions	1st line: Topical bethametasone, oral colchicine, azathiopurine, dapsone, prednisolone 2nd line: Levamisole, dapson, interferon-α, , thalidomide, azitromycin, pentoxifylline
Erythema nodosum	1st line: Oral colchicine, dapsone, prednisolone 2nd line: Indomethacin, Dapson, interferon-α, thalidomide, azithromycin, erythromycin
Articular involvement	1st line: Indomethacin, oxaprozin, analgesics and the other nonsteroid antiinflammatory drugs, sulphasalasine, azathiopurine, oral colchicine, prednisolone, intrarticular triamcinolone acetonide injections and arthrocentesis. 2nd line: Methotrexate, dapson, interferon-α, thalidomide, cyclosporin A, azathiopurine + cyclosporin A 3rd line: DMARDs, serotonin reuptake inhibitors, amitiriptyline
Central nervous system involvement	1st line: Oral corticosteroids + azathiopurine, pulse iv methyl prednisolone, oral prednisolone 2nd line: Oral or pulse iv cyclophosphamide, chlorambucil, methotrexate, azathiopurine
Cardiovascular disease, arteritis, and venous thrombosis	1st line: Oral or pulse iv cyclophosphamide, azathiopurine, pulse iv methyl prednisolone, oral prednisolone, aspirin, sc or iv heparin, oral or iv warfarin, i.v. streptokinase 2nd line: Dipyridamol, corticosteroid + cyclophosphamide. 3rd line: Surgery, percutaneous transluminal angioplasty, cyclosporine A
Thoracic involvement	1st line: Oral prednisolone + pulse iv cyclophosphamide 2nd line: Pulse iv corticosteroid + pulse iv cyclophosphamide 3rd line: Anti-TNF agents
Epididimoorchitis	1st line: Oral prednisolone, colchicine, nonsteroid antiinflammatory drugs 2nd line: Cyclosporine A
Uveitis	1st line: Topical corticosteroids eye-drops and ointments, mydriatics/cycloplegics, β-blockers, α_2-agonists, oral colchicine, oral prednisolone, cyclosporin A, azathiopurine, intravitreal and parabulbar sub-Tenon capsule injections. 2nd line: Pulse iv methyl prednisolone, oral methotrexate, carbonic anhydrase inhibitors, chlorambucil, topical NSAIDs 3rd line: Infliximab, etanercept, interferon-α, thalidomide, Tacrolimus, corticosteroids + cyclophosphamide, azathiopurine + colchicine, cortocisteroids + cyclophosphamide + azathiopurine, i.v. immunoglobulins, plasmapheresis, granulocytopheresis, mycophenolate mofetil.
Gastrointestinal involvement	1st line: Sulfasalazine, corticosteroids 2nd line: Cyclosporine A, azathiopurine, surgery 3rd line: İntraarterial corticosteroids injections
Renal involvement	1st line: Corticosteroids, azathiopurine, cyclophosphamide, cyclosporine 2nd line: Peritoneal hemodialysis, renal surgery and renal transplantation

Yeni Tedavi Seçenekleri

- Alemtuzumab (anti-CD52 **MK-BH**, göz, vasküler, SSS), Daklizumab (anti-IL-2-Tac/CD25, göz), hematopoietik kök hücre nakli, azasitidin (**OÜ**, GİÜ), ustekinumab, iksekizumab bevakizumab (VEGFantagonisti), sekukinumab, brodalumab, JAK-inh (Tofasitinib) dirençli BH için denenmektedir.

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Teşekkürler:☺))