KLİMİK 2017
XVIII. TÜRK KLİNİK MİKROBİYOLOJİ VE İNFEKSİYON HASTALIKLARI KONGRESİ

Büyük Vizit

Doç. Dr. Mehtap Aydın

Başkent Üniversitesi İnfeksiyon Hatalıkları ve Klinik Mikrobiyoloji

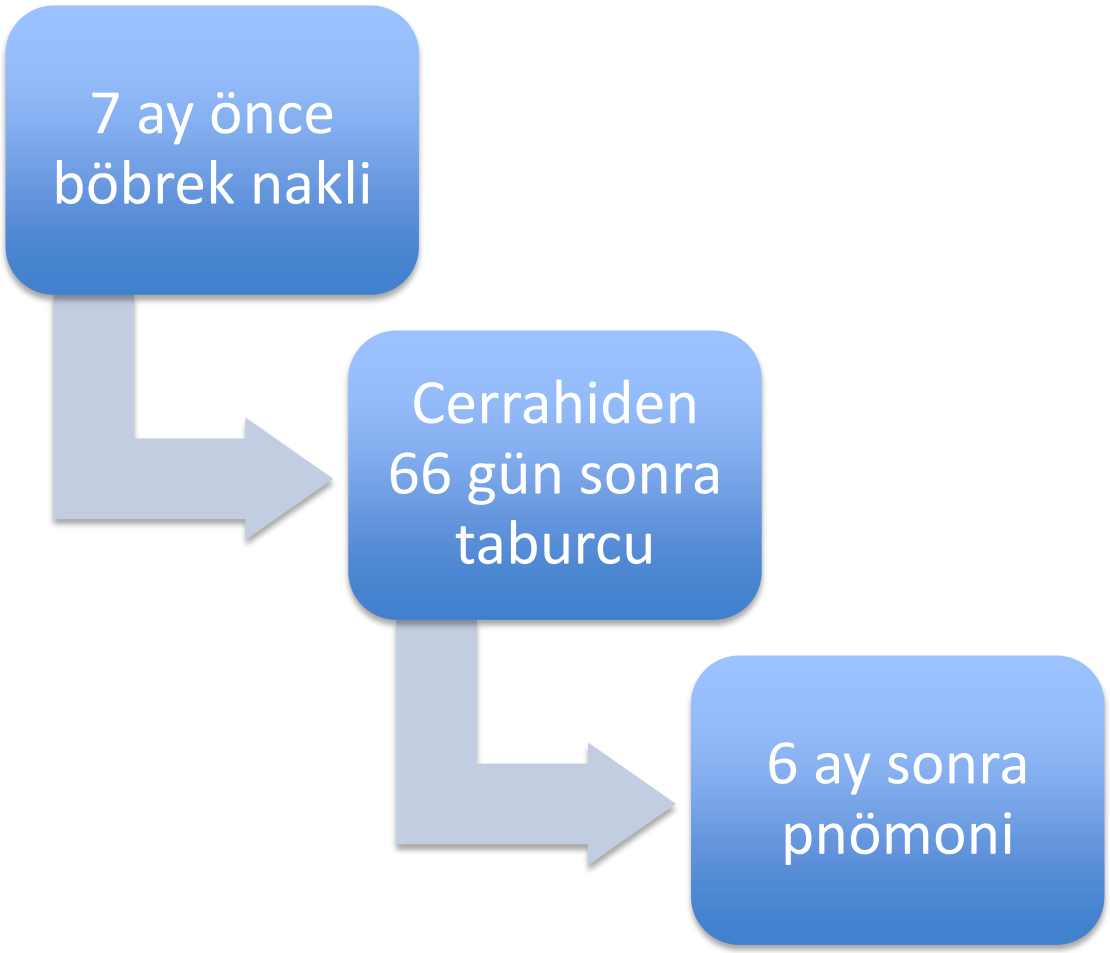
Yakınma

- 51 yaşında kadın
- Ateş yüksekliği (39^0C)
- Konuşma bozukluğu
- Bilinç değişikliği, kol ve bacaklarda kasılmalar

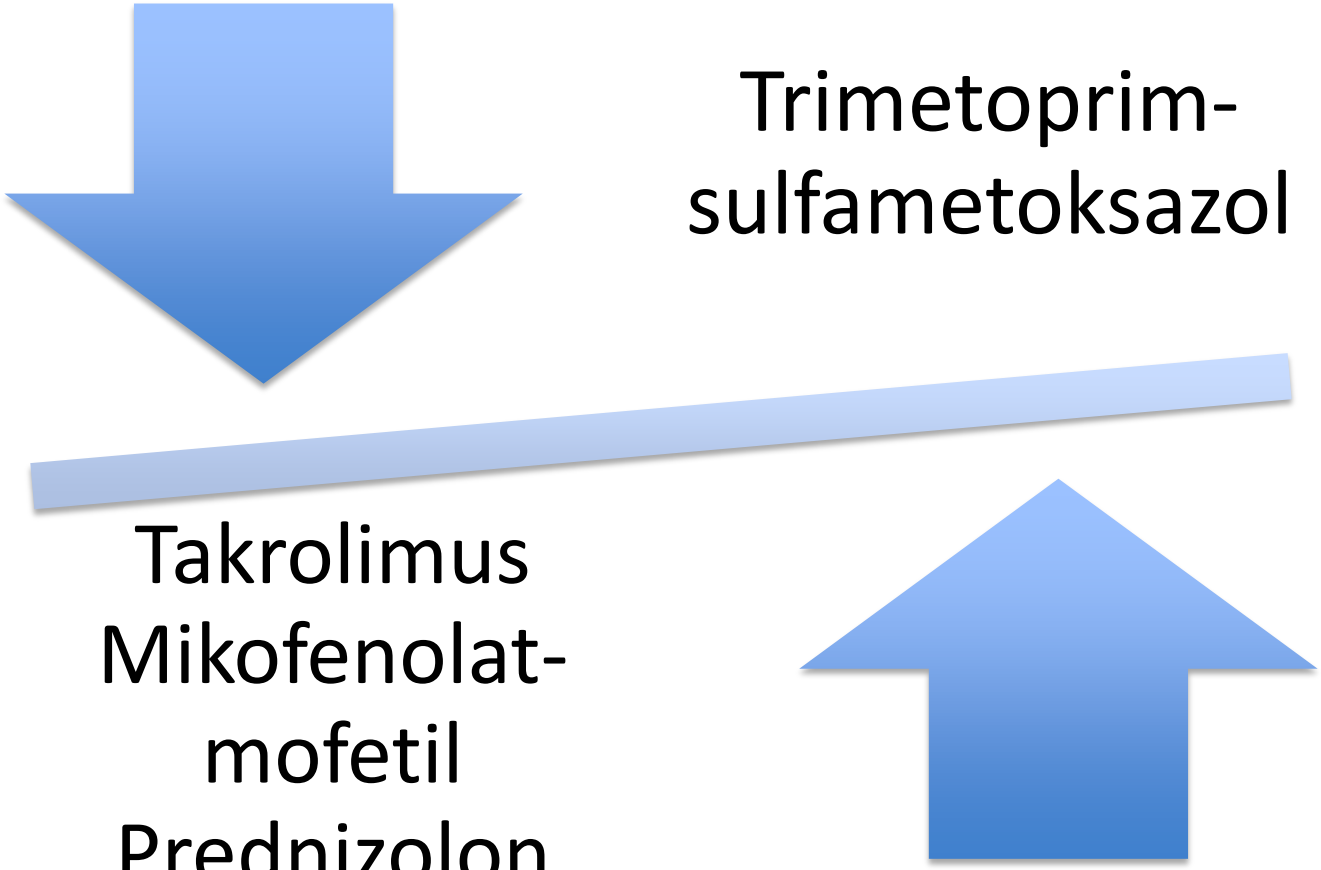
Öykü

- 5 gün önce hastaneden taburcu
- Pnömoni tanısı
  - Nefes darlığı, solunum seslerinde azalma, lökositoz, CRP yüksekliği, radyolojik bulgu
- Balgam, bronkoalveolar sıvı boyama ve kültürleri yapılmamış
- 14 gün Piperasilin- tazobaktam, siprofloksasin

Öykü


7 ay önce böbrek nakli
Cerrahiden 66 gün sonra taburcu
6 ay sonra pnömoni

Öykü

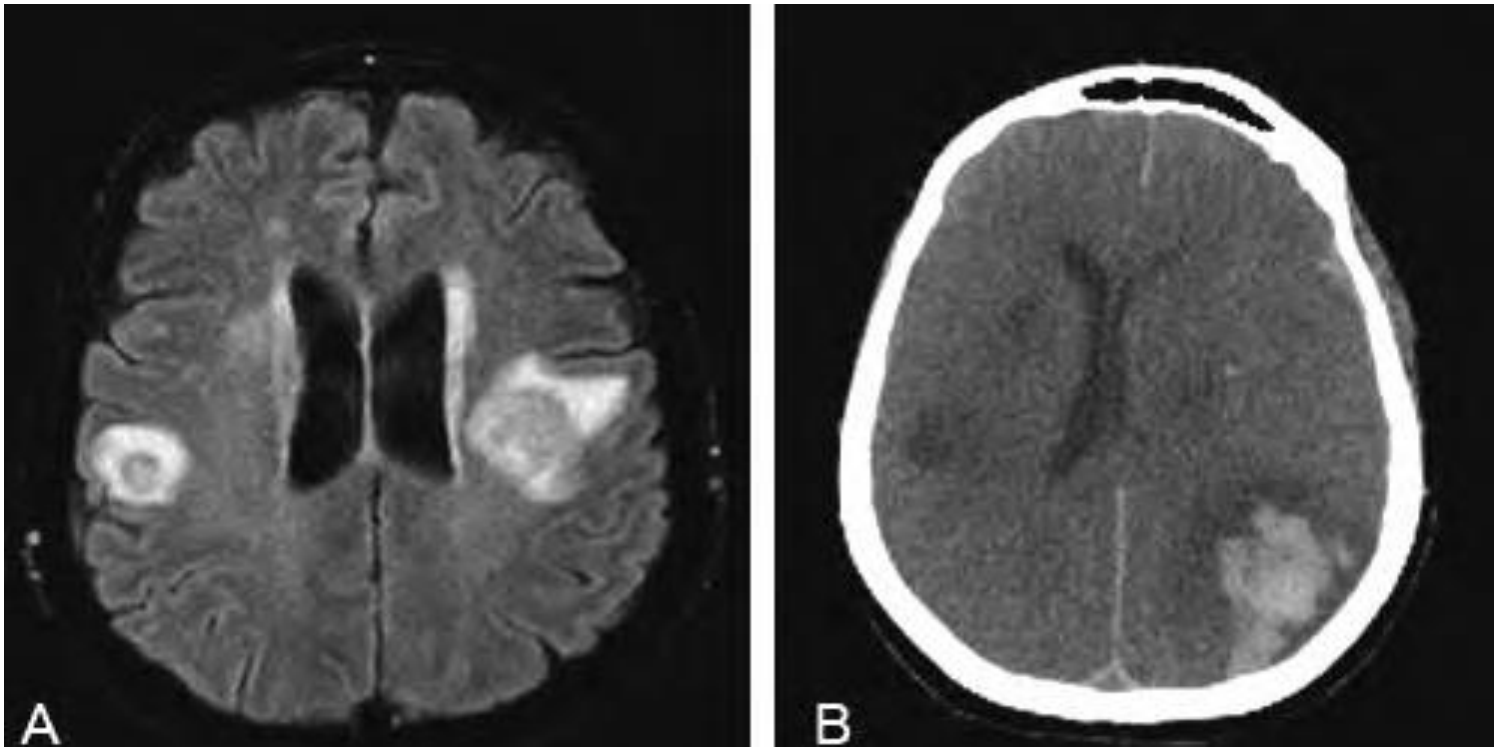

Trimetoprim-
sulfametoksazol
Takrolimus
Mikofenolat-
mofetil
Prednizolon

Fizik Muayene

- Ateş:39^0C
- Fasiyal paralizi
- Extremitelerde spastisite
- Ense sertliği

Tanısal inceleme ?

Radyolojik İnceleme



- ✓ MRI: Bilateral serebral hemisferde multiple abseler
- ✓ Sol serebellum, sağ bazal gangliyonlarda multiple abseler
- ✓ Beyin BT: İntraparankimal hematom, subaraknoid kanama

Laboratuvar İnceleme

- Hemoglobin: 10.4g/dl
- Lökosit: 2450/µL
  - %93 PNL
- Trombosit: 94000K/µl
- CRP: 51mg/L

Lomber ponksiyon

- Lökosit: 1600/mm^3
  - %74 Lenfosit
  - %26 Nötrofil
- Protein: 267mg/dL
- Glukoz: 50mg/dl (*1/2 Eş zamanlı kan şekeri*)
- Boyama: Mikroorganizma görülmedi

Kaynak?

- Toraks tomografisi
- Abdomen tomografisi
- EKO
  - Patoloji tespit edilmedi

Empirik Tedavi ?

Empirik Tedavi

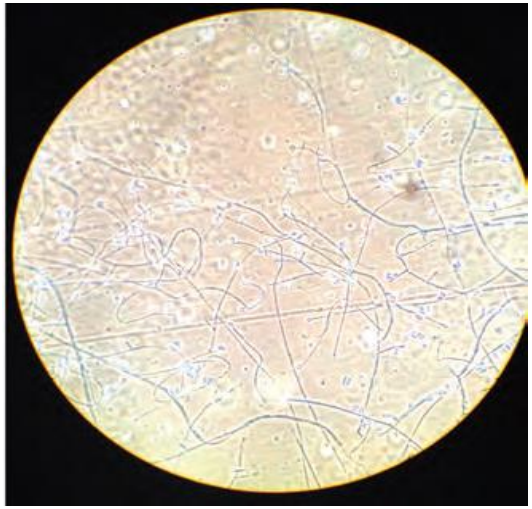
- Meropenem (3x2gr/gün)
- Linezolid (2x600mg/gün)
- TMP-SXT (15mg/kg/gün)
- Liposomal Amfoterisin B (5mg/kg/gün)
- İmmunosupresif ilaçlar azaltıldı

Mikrobiyolojik İnceleme

- ARB: Negatif, Tüberküloz PCR:Negatif
- CMV, EBV PCR: Negatif
- Brusella aglütinasyonu: Negatif
- Anti Toksoplazma IgM: Negatif
- Galaktomannan: Negatif
- Kriptokok antijeni: Negatif
- BOS kültürü: 5. günde maya üredi

Mikrobiyolojik İnceleme

SDA: 5. günde krem rengi ve açık kahverengi üreme



“Laktofenol cotton blue”: Ayrık duran septasz hifler
Tek hücreli ve göz yaşı şekilli konidia

Phialemonium spp.

Mikrobiyolojik İnceleme

E-test ile antifungal duyarlılık

Duyarlı

İtrakonazol

Vorikonazol

Dirençli

Amphotericin B

Tedavi

- İntravenöz vorikonazol (2x6mg/kg/gün-2X4mg/kg/gün)
- Abselerde kapsül oluşmadığından drene edilemedi.
- 30. günde ex oldu

Tartışma

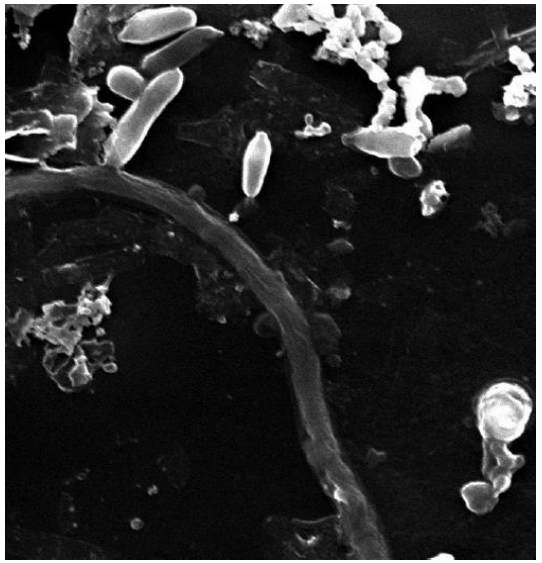
- İnfeksiyon riski 1-6 ay en yüksek
- Fungal infeksiyon
  - Güçlü immünsüpresifler, geniş spektrumlu antibiyotikler nedeniyle İFİ riski
  - Akciğerden hematojen yayılım?
  - Fungal trombüs nedeniyle iskemik ve hemorajik infarktlarda kapsül oluşamayabiliyor
  - İnflamatuvar yanıtta yetersizlik nedeniyle nekrotik alanları çevreleyecek kapsül oluşumu yetersiz

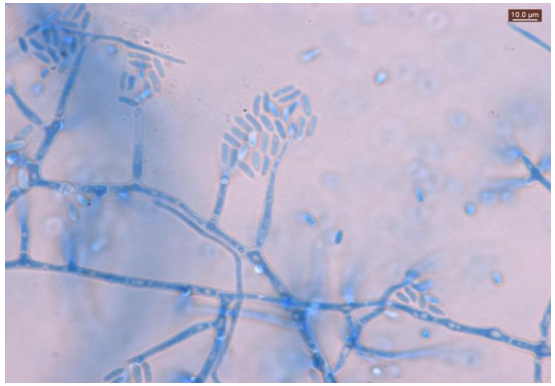
Phialemonium

- Fırsatçı mantar infeksiyonu
- Aseksüel üreme
- Esmer/pigmentli filamentöz mantarlardır
  - Hücre duvarında melanin bulunur
- Toprak, bitki, organik atıklarda bulunur

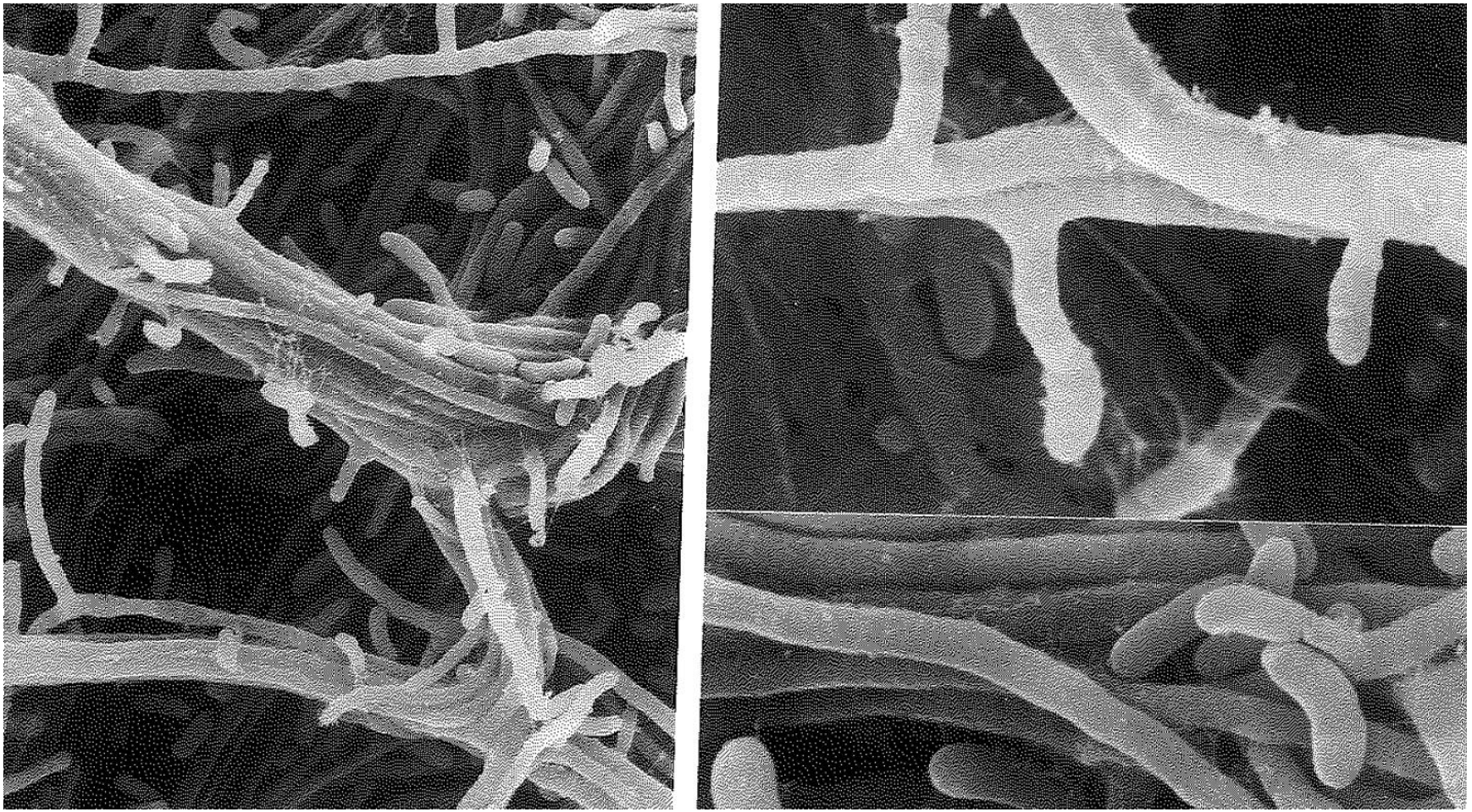
Phialemonium

- “Phialides”lar birbirlerine eklenmiş şekilde, nadiren dallanma gösterir
- “Konidia”lar tek hücreler, pürüzsüz duvarlı, kümeleşmiş bulunurlar
- Acremonium spp
- Lecytophora spp
- Hormanoma spp





Phialemonium



Phialemonium

TABLE 1. Characteristics of *Phialemonium* species

Isolate	Morphology			Growth temp (°C)
	Colony	Conidia	Conidiophores	
Case 1	White, becoming yellow with production of a diffusible yellow pigment; later becoming gray (a vinaceous pigment was produced under some conditions)	Cylindrical to allantoid, 3.0–8.0 by 1.0–2.0 μm; no chlamydoconidia	Phialides, often with distinct collarettes; pegs 1.8–4.4 μm long by 1.5 μm wide; discrete phialides 4.5–29 μm long by 1.5 μm wide	15–37
P. curvatum	White, becoming yellow or grayish	Uniformly cylindrical to allantoid, 3.5–6.0 by 1.0–1.4 μm; no chlamydoconidia	Phialides, usually without collarettes; pegs 1–7 μm long by 0.5–1.0 μm wide; discrete phialides up to 12–22 μm long by 1.5–2.0 μm wide	10–36
P. dimorphosporum	White, becoming cream-colored and pale vinaceous buff on reverse and near margin	Allantoid or ellipsoidal to obovate, 4.0–5.5 by 1.0–1.5 μm; rare swollen cells in old cultures	Phialides, usually without collarettes; pegs 2.0–9.0 μm long by 0.6–1.0 μm wide; discrete phialides, 10.0–30.0 μm 1.5 μm wide	10–34
P. obovatum	White, becoming pale yellow or greenish with production of a green diffusible pigment; later becoming black at center	Obovate, consistently straight, with an apiculate and minutely truncated base, 3.5–6.0 by 1.2–1.7 μm; chlamydoconidia in very old cultures	Phialides, usually without collarettes; pegs, 1.0–9.0 μm long by 0.5–1.0 μm wide; discrete phialides up to 15 μm long by 1.0–2.0 μm wide	15–40

- Üreme ısılarına, hiflerin büyüklüklerine, konidiaların şekil veya dizilişlerine göre tipleri tayin edilir
- Moleküler olarak adlandırılırlar

Phialemonium

- Nodüler cilt altı infeksiyonları
- Peritonit
- Menenjit
- Sağlık bakımı ilişkili infeksiyonlar
- Göz (endoftalmit)
- Frontal, maksiller sinüs
- Akciğer
- Kalp (Endokardit)
- Kemik (Osteomyelit)
- Yanık

Phialemonium curvatum Prosthetic Valve Endocarditis with an Unusual Echocardiographic Presentation

Azriel Osherov, M.D., Ehud Schwammenthal, M.D., Raphael Kuperstein, M.D., Jacob Strahilevitz, M.D., and Micha S. Feinberg, M.D.

Heart Institute, Sheba Medical Center, Tel Hashomer, Israel, and Sackler School of Medicine, Tel Aviv University, Israel

Phialemonium *species, an opportunistic fungal pathogen rarely causes invasive disease, have be described as opportunistic infection agents in humans, mainly as a result of immunosuppressi and very rarely involves the heart. We present a case of a patient with* Phialemonium curvatu *prosthetic aortic valve endocarditis with an unusual initial transesophageal echocardiography (TE presentation, illustrating the important role of repeat TEE for the proper diagnosis and manageme of infective endocarditis. (ECHOCARDIOGRAPHY, Volume 23, July 2006)*

Outbreak of Bloodstream Infection With the Mold *Phialemonium* Among Patients Receiving Dialysis at a Hemodialysis Unit

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BACKGROUND Molds are a rare cause of disseminated infection among dialysis patients.

OBJECTIVE. We evaluated a cluster of intravascular infections with the mold *Phialemonium* among patients receiving hemodialysis at the same facility in order to identify possible environmental sources and prevent further infection.

DESIGN. Environmental assessment and case-control study.

SETTING. A hemodialysis center affiliated with a tertiary care hospital.

METHODS. We reviewed surveillance and clinical microbiology records and performed a blood culture survey for all patients. The following data for case patients were compared with those for control patients: underlying illness, dialysis characteristics, medications, and other possible exposure for 120 days prior to infection. Environmental assessment of water treatment, dialysis facilities, and heating, ventilation, and air-conditioning (HVAC) systems of the current and previous locations of the dialysis center was performed. Samples were cultured for fungus; *Phialemonium* isolates were confirmed by sequencing of DNA. Investigators observed dialysis access site disinfection technique.

RESULTS. Four patients were confirmed as case patients, defined as a patient having intravascular infection with *Phialemonium* species; 3 presented with fungemia, and 1 presented with an intravascular graft infection. All case patients used a fistula or graft for dialysis access, as did 12 (75%) of 16 of control patients ($P = .54$). Case and control patients did not differ in other dialysis characteristics, medications received, physiologic findings, or demographic factors. *Phialemonium* species were not recovered from samples of water or dialysis machines, but were recovered from the condensation drip pans under the blowers of the HVAC system that supplied air to the dialysis center.

Contaminated Product Water as the Source of *Phialemonium curvatum* Bloodstream Infection among Patients Undergoing Hemodialysis

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OBJECTIVE. We investigated a cluster of cases of bloodstream infection (BSI) due to the mold *Phialemonium* at a hemodialysis center in Illinois and conducted a cohort study to identify risk factors.

DESIGN. Environmental assessment and cohort study.

SETTING. A hemodialysis center in a tertiary care hospital.

METHODS. A case patient was defined as a person who underwent dialysis at the center and had a blood sample that tested positive for *Phialemonium curvatum* on culture. We reviewed microbiology and medical records and tested water, surface, and dialysate samples by culture. Molds isolated from environmental and clinical specimens were identified by their morphological features and confirmed by sequencing DNA.

RESULTS. We identified 2 case patients with BSI due to *P. curvatum*. Both became febrile and hypotensive while undergoing dialysis on the same machine at the same treatment station, although on different days. Dialysis machines were equipped with waste handling option ports that are used to discard dialyzer priming fluid. We isolated *P. curvatum* from the product water (ie, water used for dialysis purposes) at 2 of 19 treatment stations, one of which was the implicated station.

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Phialemonium infection complicating chronic suppurative otitis media

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ABSTRACT

Phialemonium infection in humans is rare. We report a 7-year-old healthy boy who presented with chronic otorrhea, which persisted despite adequate antibiotic therapy and four preservative tympanomastoidectomy operations. Following 3 years of intermittent topical antibiotic therapy, cultures eventually grew Phialemonium, which necessitated a more extensive operation, combined with systemic/topical anti-fungal agent to achieve clinical cure.

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CASE REPO

Infective Meningitis Caused by *Phialemonium curvatum*

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Infections caused by rarely encountered fungal pathogens have increased in recent decades. *Phialemonium* species are widely distributed in the environment and are also involved in human infections, affecting both immunocompromised and immunocompetent patients. The present study describes a case of meningitis caused by *Phialemonium curvatum*.

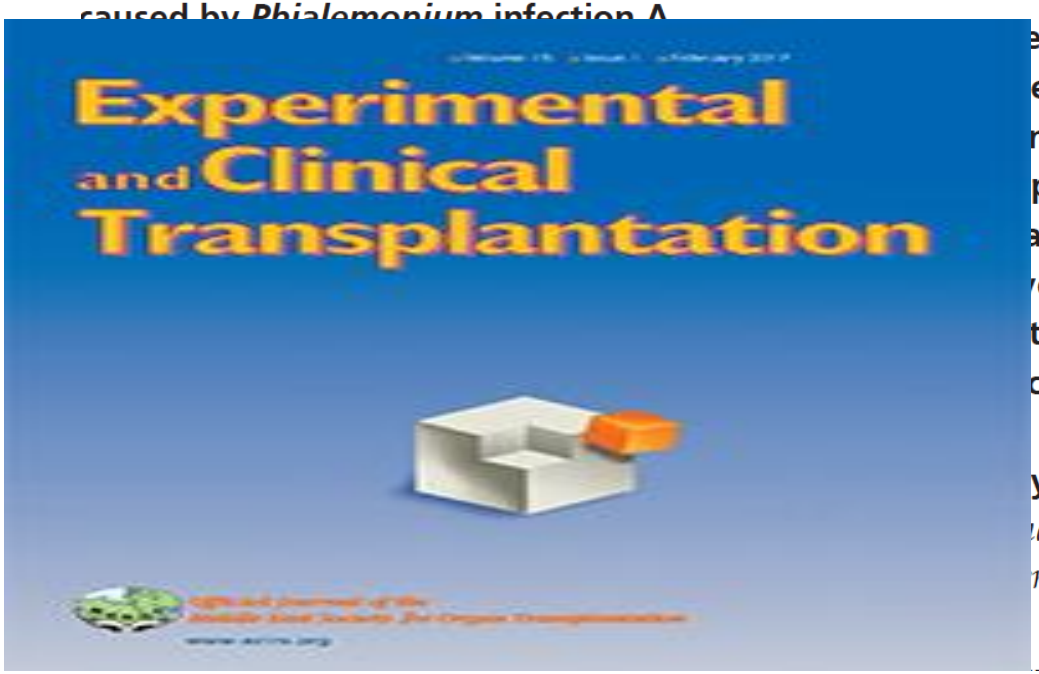
Multiple Brain Abscesses Due to *Phialemonium* in a Rena Transplant Recipient: First Case Report in the Literature

Mehtap Aydın,[1] Ümit Özçelik,[2] Halime Çevik,[3] Özlem Çınar,[4] Ebru Evren,[5] Alp Demirağ[2]

Fungal brain abscesses are a rare but serious complication in transplant recipients. *Phialemonium* organisms are rare causes of invasive mold infections. Here, we present the first case of a renal transplant recipient with multiple brain abscesses caused by *Phialemonium* infection. A

be drained due to lack of capsula formation. The patient died on the 30th day of antifungal therapy. *Phialemonium* organisms, although a rare cause of fungal infections, are associated with a high mortality rate in immunocompromised patients.

To our knowledge, this is the first case report in e literature describing multiple brain abscesses e to *Phialemonium* in a transplant recipient. nicians recipient should be alert about these rare portunistic fungi in the differential diagnosis of ain abscess, and bronchoscopy and broncho- veolar lavage are recommended for transplant tients when they are admitted with pneumonia clude fungal infections.



y words: *Central nervous system infection, Chronic al failure, Fungal infection, Immunosuppressive rapy, Organ transplant*

Teşekkürler