Enfeksiyonla Karışabilecek Enfeksiyon Dışı Nedenler

Dr. Ferit KUŞCU
Çukurova Üniversitesi Tıp Fakültesi, Enfeksiyon Hst ve Kli. Mik AD

"HE WHO KNOWS , KNOWS MEDICINE

HIV

Prof. Dr. Hüsnü PULLUKÇU

Spectrum of HIV Complications

Malignancy

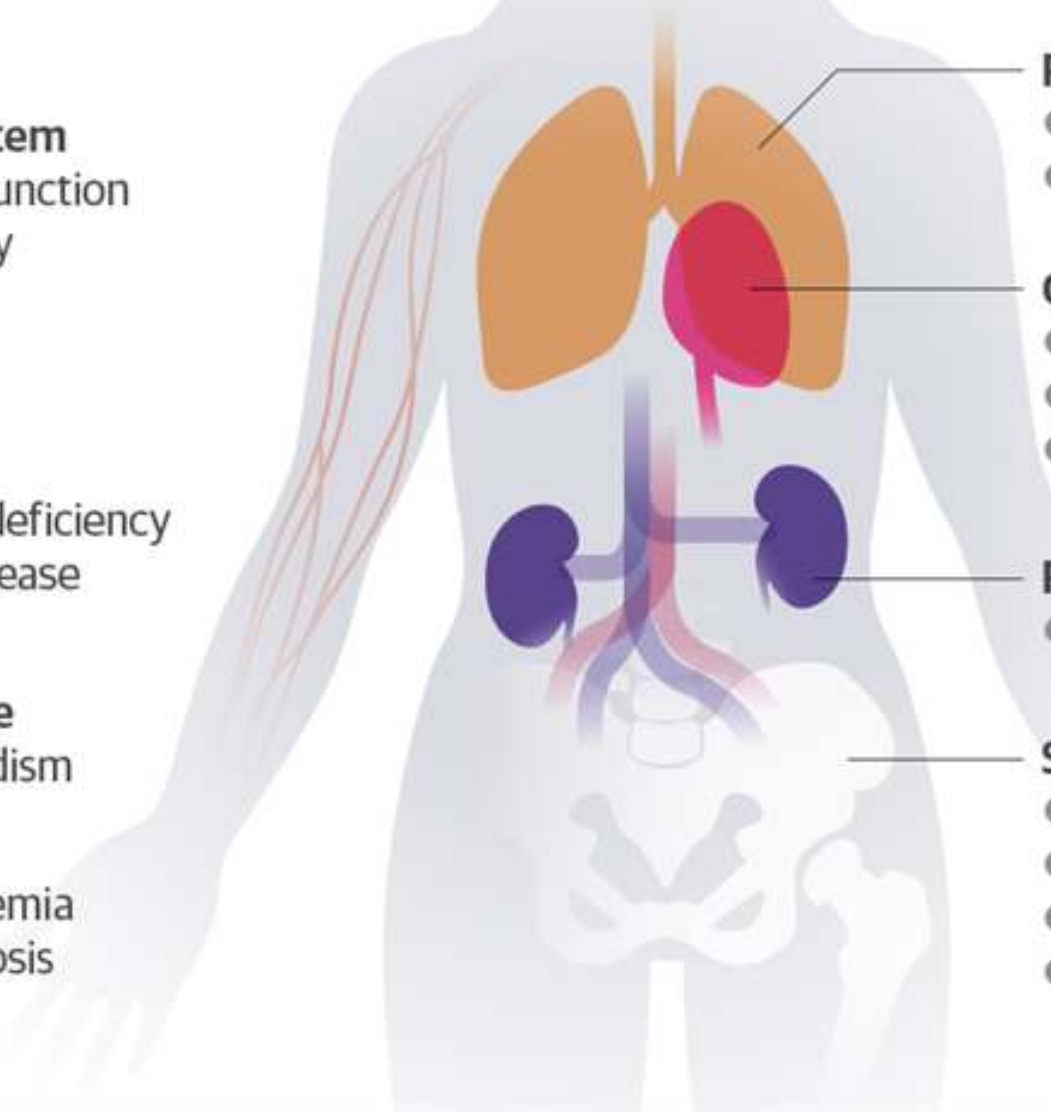
Nervous System
- Cognitive function
- Neuropathy

GI
- Diarrhea

Endocrine
- Vitamin D deficiency
- Thyroid disease
- Diabetes

Reproductive
- Hypogonadism

Metabolic
- Hyperlipidemia
- Lactic acidosis



Pulmonary
- Pulmonary hypertension
- Pulmonary fibrosis

Cardiovascular
- Hypertension
- Atherosclerosis
- Vascular disease

Renal
- Renal insufficiency

Skeletal/Muscle
- Osteoporosis/penia
- Fractures
- Myopathy
- Sarcopenia

ATEŞ

- Etkili ART seçenekleri ile HIV hastalarında yıllar içinde nedeni bilinmeyen ateş insidansı oldukça azalmıştır.

ATEŞ

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ORIGINAL ARTICLE

Clinical presentation, causes and outcome of febrile episodes in a prospective cohort of HIV-infected patients

Paul De Munter[a,b], Inge Derdelinckx[a,b], Willy E. Peetermans[a,b], Steven Vanderschueren[a,b] and Eric Van Wijngaerden[a,b]

[a]Department of Microbiology and Immunology, KU Leuven – University of Leuven, Leuven, Belgium; [b]Department of General Internal Medicine, University Hospitals Leuven, Leuven, Belgium

ABSTRACT

Background: Fever was frequently caused by opportunistic conditions in HIV-patients in the early years of the epidemic. Little is known about diagnostic spectrum and outcome of febrile episodes in patients with good access to antiretroviral therapy.

Methods: We prospectively studied clinical presentation, diagnosis and outcome of febrile episodes in a contemporary cohort of HIV-patients with good access to antiretroviral therapy. Fever was defined as temperature 38.3°C or higher, measured by a health care provider.

Results: We found 220 febrile episodes in 146 patients. In 25.9% of episodes the patient had a CD4 less than 200/mm^3 and in 78.6% the patient was on antiretroviral therapy. There were multiple episodes in 44 patients. A diagnosis was established in 91.8%. Infection accounted for 82.3%, mainly respiratory tract infections, viral syndromes and abdominal infections. Malignancy, drug reactions and inflammatory conditions accounted together for less than 12% of episodes. Fifteen percent were attributed to opportunistic conditions. Episodes in patients with CD4 less than 200 were less likely to be caused by infection, but more likely to be caused by malignancy, drug reactions and opportunistic conditions. In 6.4% the patient died within six months after the onset of fever. Risk factors for death at six months in multivariable analysis were higher age and lower CD4.

Conclusions: HIV-patients with access to antiretroviral therapy present with fever mostly due to conditions common in the general population. HIV-patients with low CD4 remain at risk for fever due to opportunistic conditions and death.

ARTICLE HISTORY
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KEYWORDS
Antiretroviral therapy; fever; HIV; immune reconstitution inflammatory syndrome; opportunistic conditions

Type	Nature	Specification	Organism	Number	% of episodes
Infection[a]				181	82.3%
	Respiratory tract infection[a]			75	34.1%
	Lower[a]			45	20.5%
		Pneumonia[a]		31	14.1%
			Pneumocystis jiroveci	10	4.5%
			Streptococcus pneumoniae	5	2.3%
	Upper			18	8.2%
	Viral syndrome[a]			29	13.2%
			Influenza	15	6.8%
	Abdominal infection[a]			25	11.4%
		Gastro-enteritis/colitis[a]		18	8.1%
			Shigella	3	1.4%
			Salmonella	2	0.9%
			Campylobacter	1	0.5%
	Mycobacterial infection			7	3.2%
			Mycobacterium tuberculosis	4	1.8%
			Mycobacterium avium/intracellular	3	1.4%
	Cytomegalovirus infection			4	1.8%
	Genito-urinary infection[a]			12	5.5%
		Pyelonephritis		9	4.1%
	Skin and soft tissue infection[a]			10	4.5%
		Erysipelas/cellulitis		4	1.8%
	Meningo-encephalitis[a]			6	2.7%
			Toxoplasma gondii	2	0.9%
			Cryptococcus species	1	0.6%
	Malaria			3	1.4%
	Catheter-related bloodstream infection			3	1.4%
	Neutropenic fever			2	0.9%
Malignancy[a]				11	5.0%
	Lymphoma			6	2.7%
	Kaposi's sarcoma			1	0.5%
Drug-reaction				11	5.0%
	Drug fever			7	3.2%
	Hypersensitivity reaction			3	1.4%
	Stevens-Johnson syndrome			1	0.5%
Inflammatory conditions[a]				4	1.8%
	Systemic inflammatory disease			2	0.9%
	Immune reconstitution inflammatory syndrome (no clear etiology)			1	0.5%
Other[a]				10	4.5%
	Postprocedure			5	2.3%
	Bleeding/thrombosis			2	0.9%

[a]Category count contains additional rare more specific diagnoses, not further listed under category.

FUO in HIV-Positive Patients in the Era of HAART

Sharon Weissman, MD; Marjorie P. Golden, MD; Suparna Jain, MD

Abstract and Introduction

Fever of unknown origin (FUO) constitutes a challenging problem in HIV-infected patients. Most studies of FUO in this patient group predate the use of HAART. We therefore conducted a retrospective chart review of 81 HIV-positive patients admitted during a recent 6.5-year period whose presenting symptom was fever; 27 of these met our criteria for FUO. The majority (61%) were receiving HAART. Mean CD4 cell count was 102/µL; 21 patients (78%) had counts of less than 200/µL. An infectious cause of FUO was found in 63% of the patients, a noninfectious cause (such as drug fever or immune reactivation) was identified in 15%, and no cause was found in 22%. Five patients in the infectious group had more than 1 cause of FUO.

Fever occurs commonly in patients with HIV infection, often accompanied by significant morbidity and prolonged hospitalization and occasioning an extensive evaluation. Prolonged fevers without a diagnosis, or fever of unknown origin (FUO), remains a problem in the era of HAART.

Most case series describing HIV-infected patients with FUO included only patients in the pre-HAART era. Armstrong and associates[1] found disseminated *Mycobacterium avium*-intracellulare (MAI) infection to be the most common cause of FUO in HIV-positive patients in the United States, followed by *Pneumocystis carinii* pneumonia (PCP), cytomegalovirus (CMV) infection, and lymphoma. This study included patients through January 1997. Nine (13%) of the 70 patients were on a protease inhibitor (PI)-based regimen; this included dual-therapy regimens with 1 of the drugs being a PI.[1] Studies from Europe and Brazil confirmed these findings but also found visceral leishmaniasis and *Mycobacterium tuberculosis* infection to be common causes of FUO.[2-5]

Potent antiretroviral therapy has dramatically changed the natural history of HIV disease. HAART has led to significant improvements in the immunologic status of HIV-infected patients as well as to prolonged survival. The causes of FUO in the HAART era are likely to be different from those identified in previous reports. In order to identify the clinical features of HIV-associated FUO in the HAART era, we performed a retrospective study of medical records covering a 6.5-year period at our hospital.

Infectious (17 patients)*			Noninfectious (4 patients)	Unknown (5 patients [6 admissions])
Opportunistic infection (10)	Bacterial infection (9)	Other infections (3)		
Mycobacterium avium-intracellulare infection (4) Cryptococcal infection (2) •Meningitis •Disseminated, skin lesions Cytomegalovirus infection Candida esophagitis Pneumocystis carinii pneumonia Herpes simplex virus esophagitis	Clostridium difficile colitis Complicated sinusitis (cerebritis and epidural empyema) Pelvic inflammatory disease Pyogenic sacroiliitis Soft tissue infection of the neck Urosepsis with small-bowel obstruction Klebsiella urinary tract infection Right middle lobe pneumonia Methicillin-resistant Staphylococcus aureus pneumonia	Secondary syphilis HIV reactivation syndrome Encephalitis	Adverse drug reaction (2) •Trimethoprim-sulfamethoxazole •Phenytoin Immune reconstitution syndrome Polyclonal plasmacytic lymphoproliferative disorder	Two patients (3 admissions) refused workup Post-chemotherapy fever and neutropenia Lost to follow-up Alive and well

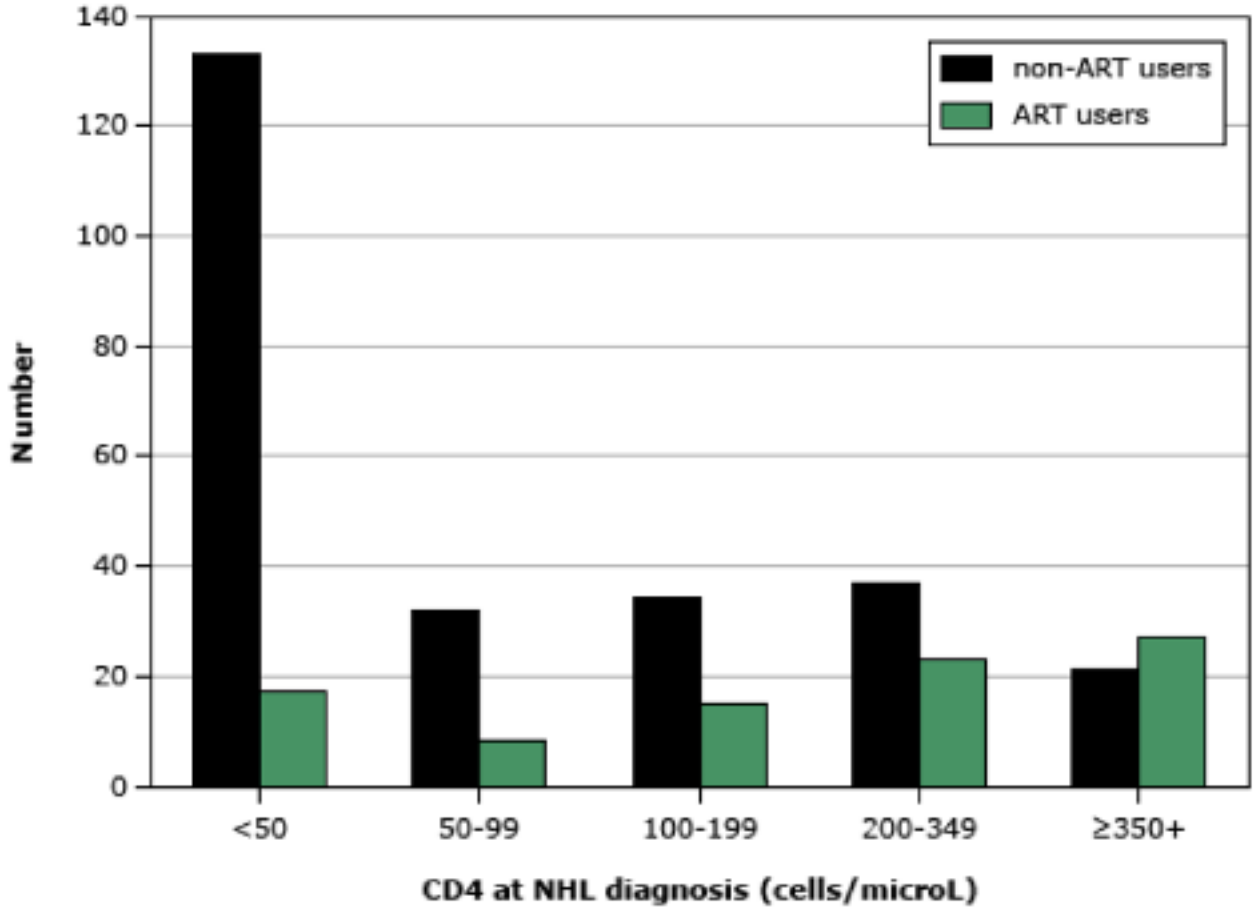
*More than 1 cause was found in 5 patients.

Study, country, period studied	Number of cases	Mean CD4 cell count	Cause found	Infectious cause	Opportunistic illness	Diagnosis
Bessuel,[4] France, 1989-1991	57	94/μL	49/57	41/49	43/49	10 Mycobacterium tuberculosis (MTB) infection; 10 other mycobacterial infections; 5 cytomegalovirus (CMV) infection; 4 each: visceral leishmaniasis (VL), non-Hodgkin lymphoma (NHL), miscellaneous; 3 Pneumocystic carinii pneumonia (PCP); 2 each: toxoplasmosis, sinusitis, unspecified type of mycobacteriosis; 1 each: cryptococcal meningitis, HIV encephalopathy, bacille Calmette-Guérin infection
Lambertucci,[7] Brazil, 1995-1997	55	98/μL	45/55	41/45	42/45	18 MTB infection; 6 PCP; 5 disseminated Mycobacterium avium complex (DMAC) infection; 4 NHL; 3 cryptococcal meningitis; 2 each: Salmonella infection, sinusitis, histoplasmosis; 1 each: syphilis, toxoplasmosis, isosporiasis
Armstrong,[1] United States, 1992-1997	70	58/μL	56/70 (72 causes)	63/72	61/72	22 DMAC infection; 10 PCP; 8 CMV infection; 5 each: histoplasmosis, viral (not CMV) infection, NHL; 4 each: bacterial infection, MTB infection; 2 each: fungal infection (not histoplasmosis), drug fever, parasitic infection; 1 each: Mycobacterium genavense infection, Kaposi sarcoma (KS), Castleman disease
Miralles,[2] Spain, 1991-1992	50	71/μL	44/50	41/44	42/44	21 MTB infection; 7 each: VL, DMAC infection; 2 NHL; 1 each: PCP, CMV infection, toxoplasmosis, aspergillosis, varicella-zoster virus infection, encephalitis, Salmonella prostatitis, drug fever
Lozano,[3] Spain, 1992-1993	128	46/μL	120/128 (143 causes)	135/143	131/143	69 MTB infection; 23 VL; 10 DMAC infection; 8 NHL; 7 each: sinusitis, PCP; 5 CMV infection; 3 each: Nocardia infection, toxoplasmosis; 1 each: cryptococcal meningitis, cryptosporidiosis, Q fever, brucellosis, mucormycosis, acute HIV infection, HIV infection, parvovirus infection
Miller,[5] United Kingdom, 1989-1993	78	40/μL	71/78	63/71	56/71	25 DMAC infection; 13 MTB infection; 12 bacterial infection; 5 PCP; 4 NHL; 3 Mycobacterium kansasii infection; 2 factitious fever; 1 each: histoplasmosis, Penicillium marneffei infection, cryptococcal infection, CMV infection, Hodgkin lymphoma, KS, Reiter syndrome

Maligniteler

- HIV, hücresel immünitede hasara yol açtığı için malignitelere yatkınlık yaratmaktadır.
- Kaposi sarkomu (KS), Non-Hodgkin Lenfoma (NHL), invaziv serviks kanseri→AIDS tanımlayıcı kanserler.
- Potent ART'ler ile AIDS tanımlayıcı kanserlerde belirgin azalma,
- Ancak HIV pozitiflerde halen normal populasyona göre yüksek kanser insidansı,
- KS ve NHL insidansı, CD4 hücre sayısı ile ters korelasyon göstermekte. Ancak diffüz büyük B hücreli lenfoma veya santral sinir sistemi lenfomalılarda bu ilişki kısıtlı.

Distribution of non-Hodgkin lymphomas (NHLs) by use of ART and CD4 cell count at diagnosis



Distribution of 347 NHLs by use of ART and CD4 cell count at NHL diagnosis. CD4 cell count at diagnosis was not available for 82 NHLs.

ART: antiretroviral therapy.

Cancer	SIR in people with HIV/AIDS
Lymphoproliferative and hematologic malignancies	
Non-Hodgkin lymphoma	22.6-353.5
Hodgkin lymphoma	3.6-18.0
Multiple myeloma	2.2-5.0
Leukemia	1.8-5.3
Cutaneous malignancies	
Kaposi sarcoma	3640
Skin carcinoma	1.5-19.6
Melanoma	0.2-1.3
Eye cancer	1.7-2.0
Genitourinary malignancies	
Cervical cancer	1.0-22.0
Vulvar/vaginal cancer	4.4-6.8
Ovarian cancer	0.3-4.4
Uterine cancer	0.5-0.9
Breast cancer	0.7-1.4
Penile cancer	3.9-8.0
Testicular cancer	0.7-1.8
Prostate cancer	0.5-1.4
Renal cancer	0.8-2.0
Bladder cancer	0.4-4.2
Gastrointestinal malignancies	
Anal cancer	19.6-50.0

Modified from: Grulich AE, van Leeuwen MT, Falster MO, Vajdic CM. Incidence of cancers in people with HIV/AIDS compared with immunosuppressed transplant recipients: a meta-analysis. Lancet 2007; 370:59.

Lenfoma

- HIV hastalarının % 25-40'ında (%10 NHL) malignite gelişme olasılığı vardır.
- Histolojik alt tiplerine göre değişim göstermekle birlikte yaygın ART kullanımıyla birlikte NHL insidansı azalmıştır.
- Ama hala HIV negatif bireylere göre insidans yüksek.

NHL

- AIDS ilişkili NHL lokalizasyona göre 3 tipe ayrılır:

1- Sistemik NHL (>%80)

2- Primer SSS lenfoması (%15)

3- Primer effüzyon (vücut boşluğu) lenfoması (<%5)

Sistemik NHL

- HIV pozitif bireylerde en sık görülen sistemik NHL subtipleri:

1-Burkitt lenfoma (~%25)

2-Diffüz büyük B hücreli lenfoma (DLBCL, ~%75)

3-Plasmablastik lenfoma (<%1)

4-T hücreli lenfoma (%1- 3)

5- Yavaş seyirli (Indolent) B hücreli lenfoma (<%10)

WHO classification of lymphoid malignancies associated with HIV infection (2008)

Lymphomas also occurring in immunocompetent patients
Burkitt and Burkitt-like lymphomas
Diffuse large B-cell lymphomas
- Centroblastic
- Immunoblastic (including primary CNS lymphoma)
Extranodal MALT lymphoma (rare)
Peripheral T-cell lymphoma (rare)
Classical Hodgkin lymphoma
Lymphoma occurring more specifically in HIV-positive patients
Primary effusion lymphoma
Plasmablastic lymphoma of the oral cavity
Lymphoma also occurring in other immunodeficiency states
Polymorphic B-cell lymphoma (PTLD-like) (rare)

MALT: marginal zone lymphoma of mucosa-associated lymphoid tissue; PTLD: post transplant lymphoproliferative disorder; CNS: central nervous system.

Source: Swerdlow, SH, Campo, E, Harris, NL, et al. (Eds). World Health Organization Classification of Tumours of Haematopoietic and Lymphoid Tissues. IARC Press: Lyon 2008.

Sistemik NHL

→ HIV negatif bireylerdeki lenfomalarla karşılaştırıldığında, HIV pozitif bireylerdeki sistemik NHL'da:

- Daha sık B semptomları (Ateş, kilo kaybı, gece terlemesi),
- Ekstranodal hastalık,
- Olağandışı lokalizasyonların tutulumu, (vücut boşlukları, rektum, yumuşak doku vb.)
- Daha ileri hastalık evresi vardır.

Sistemik NHL

- Sıklıkla HIV pozitiflerde sistemik NHL semptomları değişkendir ve patognomonik değildir.

→Başlangıç semptomları:

- Düşük düzeyde ateş,
- Lenfadenopati (sert, hareketsiz, ağrısız)
- Viral veya bakteriyal enfeksiyonu destekler nitelikte minor hematolojik veya biyokimyasal anormallikler.

Sistemik NHL

- Ekstra-nodal tutulum çok sıktır.
- Bütün organlar tutulabilir:

  Göz, testisler, oral kavite, kalp, meme, böbrek, mesane, kas, kemik vb.

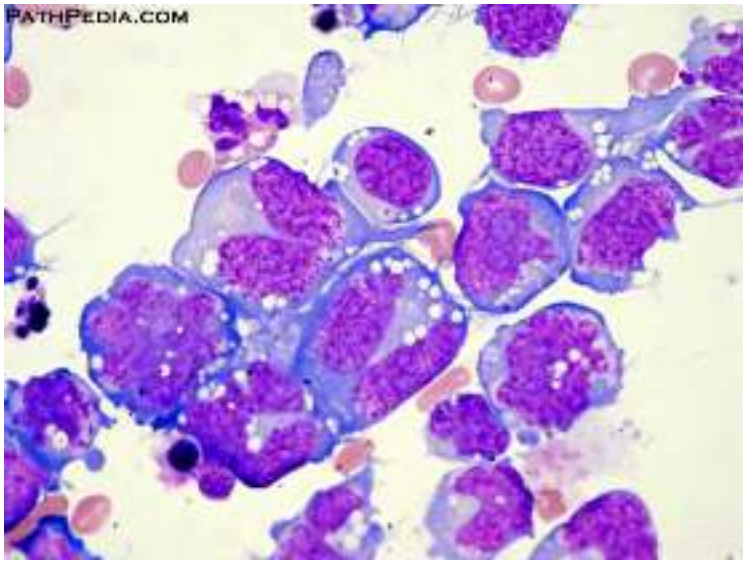
- GIS, karaciğer ve kemik iliği sıklıkla tutulur.
- Sekonder SSS tutulumu olabilir.
- Tutulan organ sistemine göre semptomlar olabilir, (karın ağrısı, HSM, barsak tutulumuna bağlı ileus, SSS tutulumuna bağlı baş ağrısı vb.

Primer Effüzyon (Vücut boşluğu) Lenfoması (PEL)

- Tanısını histolojik olarak koymak oldukça zor.
- HHV-8 ve EBV ile ilişkili.
- Görünür bir tümör kitlesi genelde yoktur.
- Malign hücreler sadece vücut boşluklarında tespit edilebilir (plevral, perikardial, peritoneal).
- HIV pozitif bireylerde ortaya çıkan her plevral ve perikardiyal effüzyon mutlaka incelenmeli ve malign hücre varlığında PEL'den şüphelenilmelidir.

Primer Effüzyon (Vücut boşluğu) Lenfoması (PEL)

- Ateşle birlikte effüzyona yola açan diğer enfeksiyoz patolojilerle karışabilir,
- Effüzyonun olduğu bölgeden alınan sıvının sitolojik incelemesi çok önemli ve ön tanı olarak mutlaka patologlara şüphenin belirtilmesi gerekmektedir.



Primer SSS Lenfoması

- HIV enfeksiyonunun geç komplikasyonlarındandır.
- Hastaların %100 ünde EBV ilişkilidir.
- Tanı konulduğu anda neredeyse bütün hastalarda CD4 sayısı 50'nin altındadır.
- Farklı düzeyde nörolojik defisitler, epileptik nöbet, baş ağrısı, kişilik değişikliği görülebilir.
- Ateş genellikle yüksek değildir.

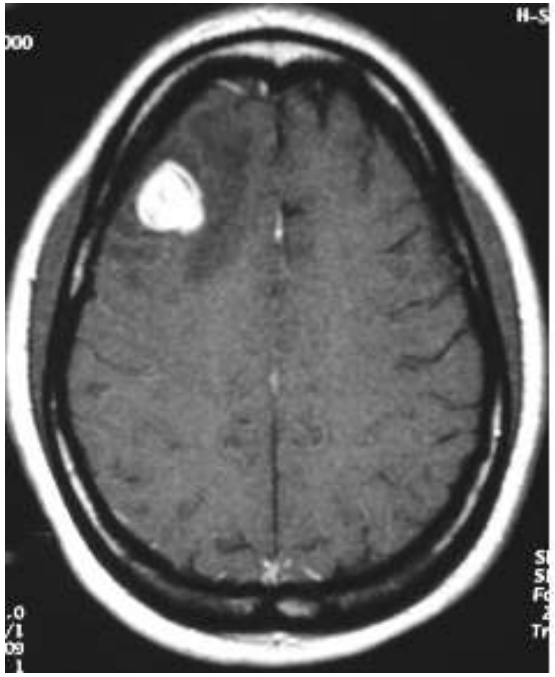
Primer SSS Lenfoması

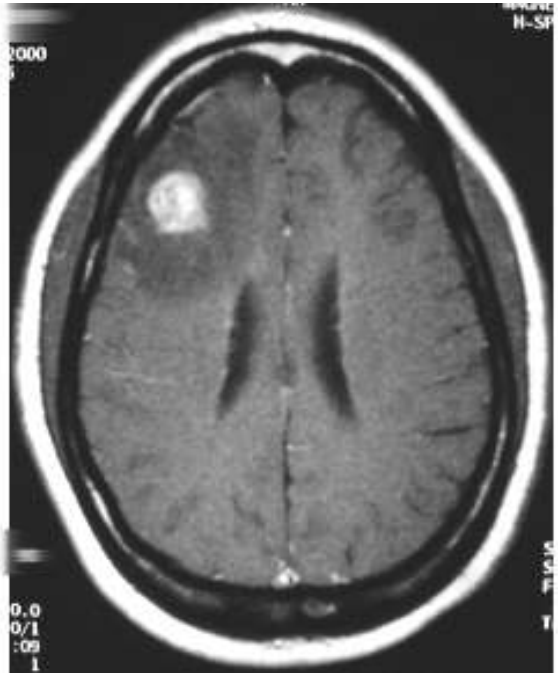
- Değişen derecelerde nörolojik defisit, epileptik nöbet, baş ağrısı, kişilik değişiklikleri görülebilir.

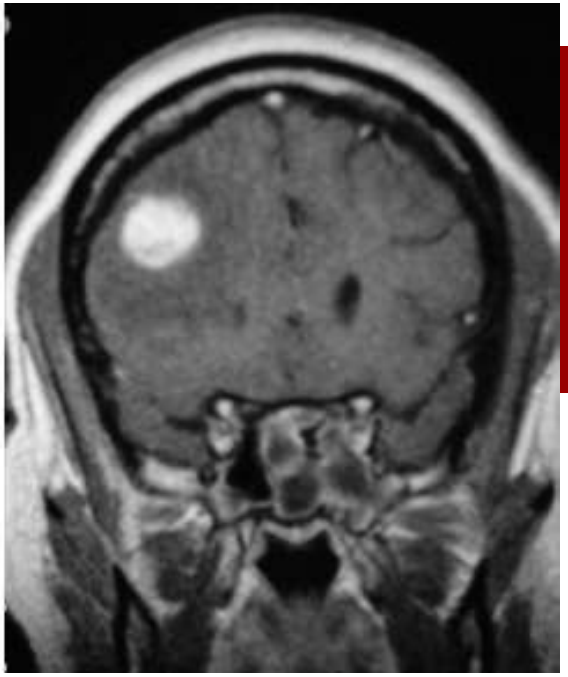
- Karışabileceği en önemli enfeksiyon hastalığı→ Serebral Toksoplazmozis.

Lenfoma X Toksoplazmoz

	SSS LENFOMASI	TOKSOPLAZMOZ
LEZYON	Tek ve büyük	Multipl
YAYILIM	Subependimal	Bazal ganglionlar ve kortikomedüller bileşke
KONTRAST TUTULUMU	Solid	Ring veya nodüler
HEMORAJİ	Tedavi öncesi yoktur	Lezyonun periferinde genelde vardır.
THALLIUM SPECT	Pozitif	Negatif
MR SPEKTROSKOPİ	Artmış Choline	Azalmış Choline
MR PERFÜZYON	Artmış serebral kan volümü	Azalmış serebral kan volümü

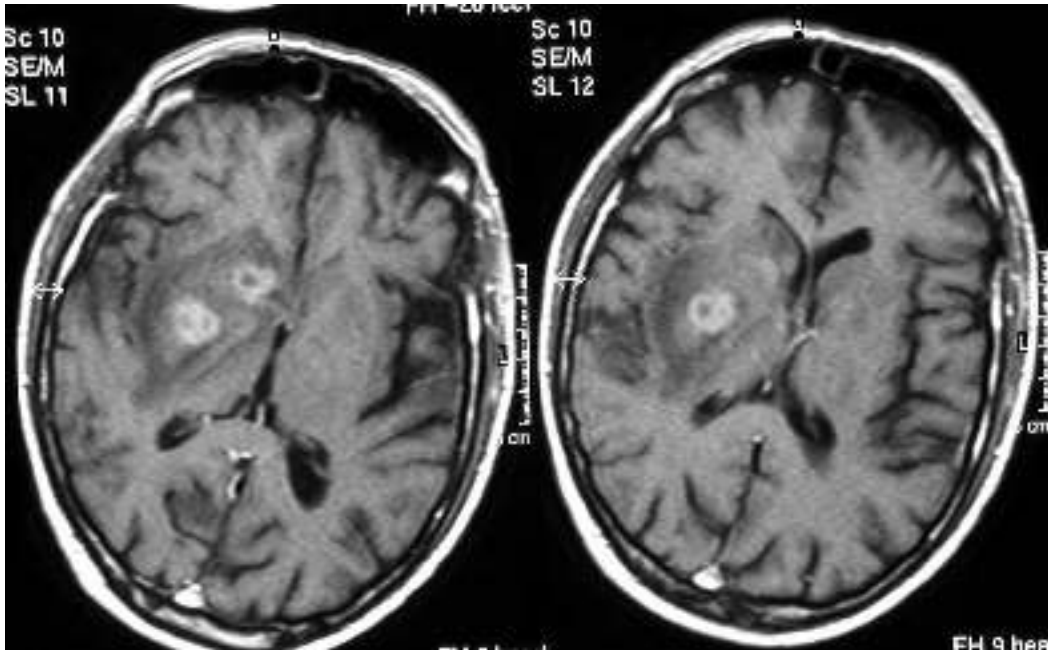






Primer SSS Lenfoması

Toksoplazmoz



Multisentrik Castleman Hastalığı

- “Anjiyofolliküler lenf nodu hiperplazisi” olarak da bilinen nadir bir lenfoproliferatif hastalıktır.
- Tükrük bezleri, akciğer, pankreas, larinks, parotis bezi, meninksler, hatta ekstremite kasları ekstralenfatik olarak tutulabilir.
- Hastaların çoğu ateş, gece terlemesi ve halsizlik ile başvurur.

Multisentrik Castleman Hastalığı

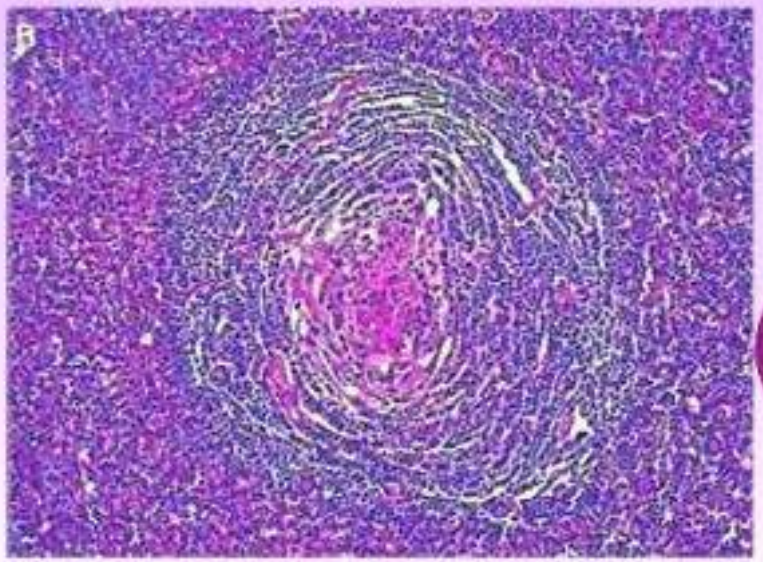
- Fizik muayenede yaygın lenfadenopati ve hepatosplenomegali belirgindir.
- Birçok hastada alt ekstremite ödemi, plevral ve perikardiyal effüzyon, assit vb sıvı yüklenmesi bulguları görülür.
- Sık görülen hematolojik anormallikler anemi, inflamatuar belirteçlerde yükseklik, hipergammaglobulinemi ve hipoalbuminemidir.
- Tanı lenf nodu biyopsisi ile konulur.

Multisentrik Castleman Hastalığı

- İnflamatuar hücrelerin aktivasyonu→artmış sitokin üretimi (özellikle IL-6) ile organların disfonksiyonlarına yol açmakta.
- IL-6→B hücre proliferasyonu ve anjiogenezi artırır.
- Lenf nodu büyümesi, grip benzeri semptomlar (halsizlik, gece terlemesi, bulantı, kilo kaybı) ve vital organların (karaciğer, böbrekler ve kemik iliği gibi) bozulmasına yol açmaktadır.

Castleman's Disease - Onion skin and Lollipop Appearance

Dr Sampurna Roy MD

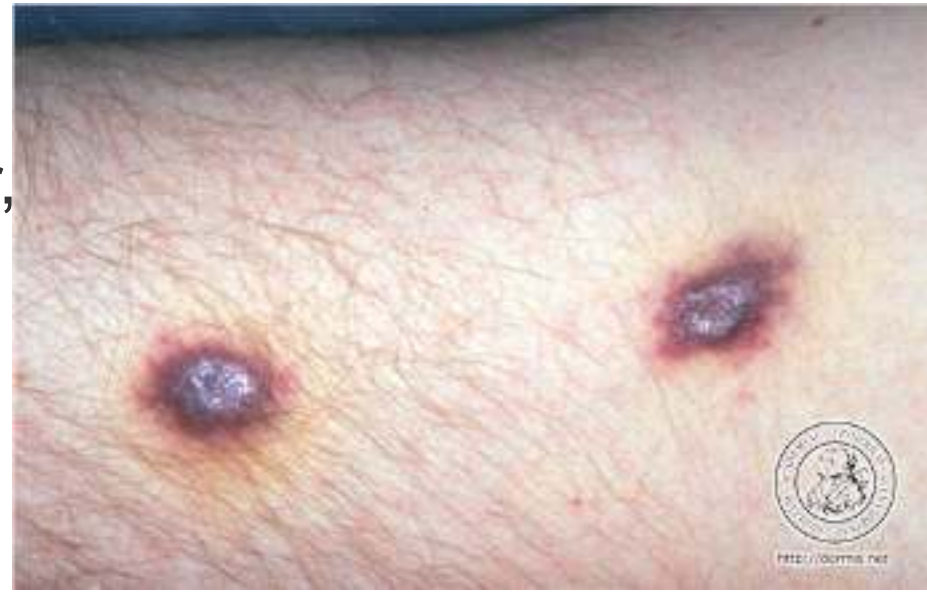


Ref: Lee J et al. Pelvic Castleman's Disease presenting as an adnexal tumor in a young woman. Obstetric and Gynecology Science. 2015 ; (58)4: 323-326

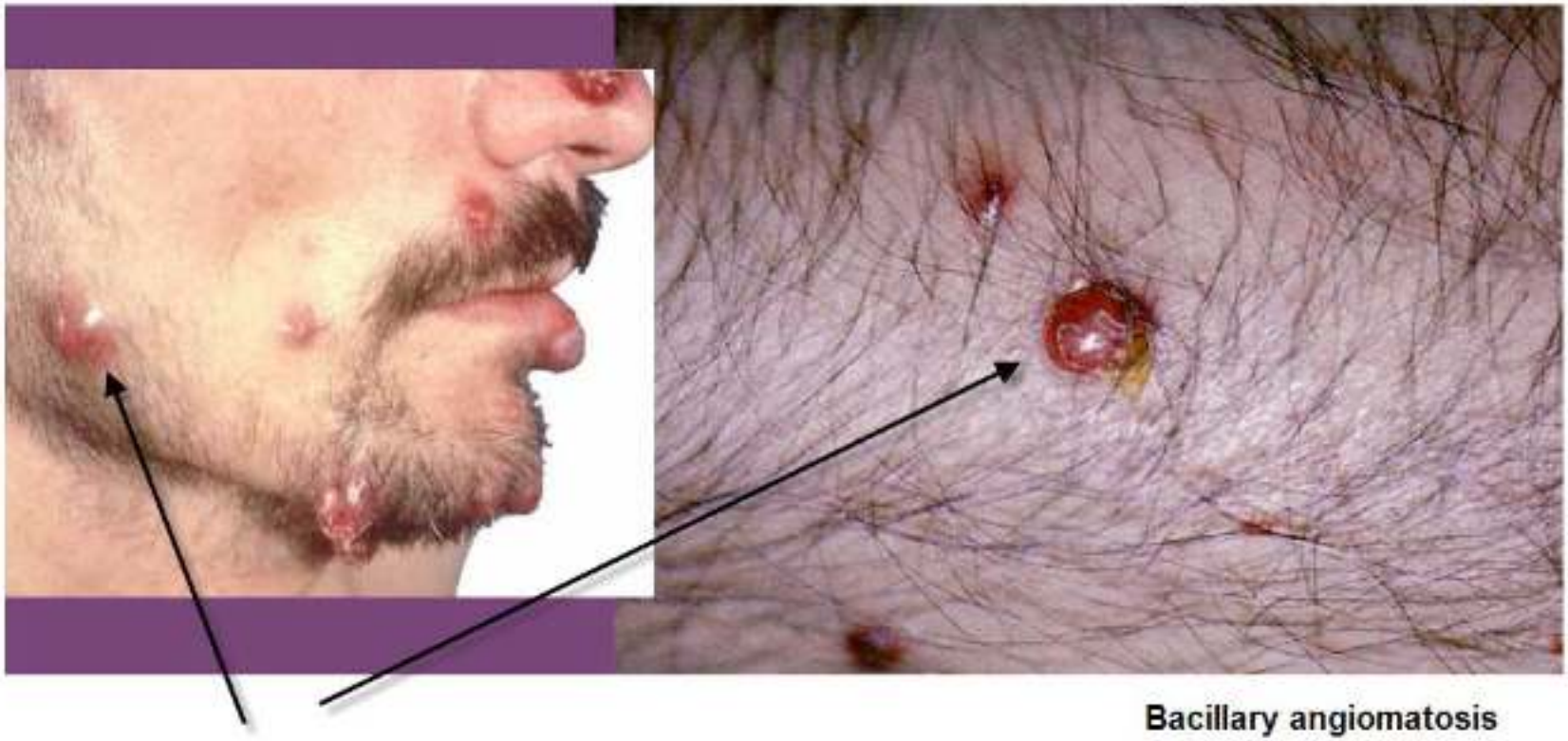
Some lymph follicles show germinal centers with concentric onion skin-like layering of surrounding lymphoid cells. Germinal centers are sometimes penetrated by a hyalinized blood vessels resembling a "lollipop"(also known as lollipop sign).

Kaposi Sarkomu (KS)

- HIV enfeksiyonu olanlarda en sık görülen malignite.
- Klasik KS'da sadece alt ekstremitedeki deri etkilenirken, HIV ilişkili KS'da deri dışında,
- Lenf nodları,
- İç organların (Mide, barsaklar, akciğer ve karaciğer) tutulumu olabilir. (%10)



Bartonella henselae-Basiller anijomatoz



Bacillary angiomatosis

This is a rare infective condition with red vascular lesions erupting in a patient with AIDS.

Öksürük, Dispne, (Ateş)

- Pulmoner bulguları olan hastada olası etken için en önemli belirleyici→CD4 sayısı
- >200 cells/µl→ Bakteriyel pnömoni, Akut bronşit ve TB.
- <200 cells/µl→ Bakteriyel pnömoni, PJP, TB
- <100 cells/µl→ **KAPOSI SARKOMU**, PJP,TB
- <50 cells/µl→ CMV+PJP, İnvaziv pulmoner aspergilloz, Atipik mikobakteriler

Pulmoner Bulgular

Infections	Neoplasia	Other
Pneumocystis jiroveci	Kaposi sarcoma (KS)	Lymphocytic interstitial pneumonia (LIP)
	Non-Hodgkin lymphoma	Non-specific interstitial pneumonia (NSIP)
Bacterial pneumonia	Hodgkin lymphoma	Cryptogenic organizing pneumonia (COP)
S. pneumoniae	Bronchial carcinoma	Pulmonary hypertension
S. aureus	Multicentric Castleman's	COPD
H. influenzae	disease (e.g., mediastinal	Bronchial hyperreactivity
B. catarrhalis	lymph nodes)	
P. aeruginosa		**Side effects of ART:**
Rhodococcus equi		Dyspnea + cough in hypersensitivity
Nocardia asteroides		reaction to abacavir
		Dyspnea + tachypnea in lactic acidosis
Mycobacteria		Pneumonia with T-20 therapy
M. tuberculosis		Pulmonary infiltration, lymph nodes and
Atypical mycobacteria		fever in IRIS
Other		
Cytomegalovirus (CMV)		
Aspergillus spp.		
Cryptococcus neoformans		
Histoplasma capsulatum		
Toxoplasma gondii		

Pulmoner Bulgular

Chest X-ray	Typical differential diagnosis
Without pathological findings	Pneumocystis pneumonia (PCP), asthma, KS of the trachea
Localized infiltrates	(Myco)-bacterial, fungal infections, lymphoma, lung cancer
Multifocal infiltrates	Bacterial pneumonia, mycobacteriosis, PCP, KS
Diffuse infiltrates	PCP (ground glass, predominantly central), CMV, KS, LIP, cardiac insufficiency, fungal infections
Miliary pattern	Mycobacterial, fungal infections
Pneumothorax	PCP
Cavernous lesions	Mycobacteriosis (CD4 >200), bacterial abscess (Staph., pseudomonas), lung cancer
Cystic lesions	PCP, fungal infections
Pleural effusion	Bacterial pneumonia, mycobacteriosis, KS, lymphoma, cardiac insufficiency
Bihilar lymphadenopathy	Mycobacteriosis, KS, sarcoidosis, lymphoma, multicentric Castleman's disease

KS = Kaposi sarcoma, LIP = Lymphoid interstitial pneumonia

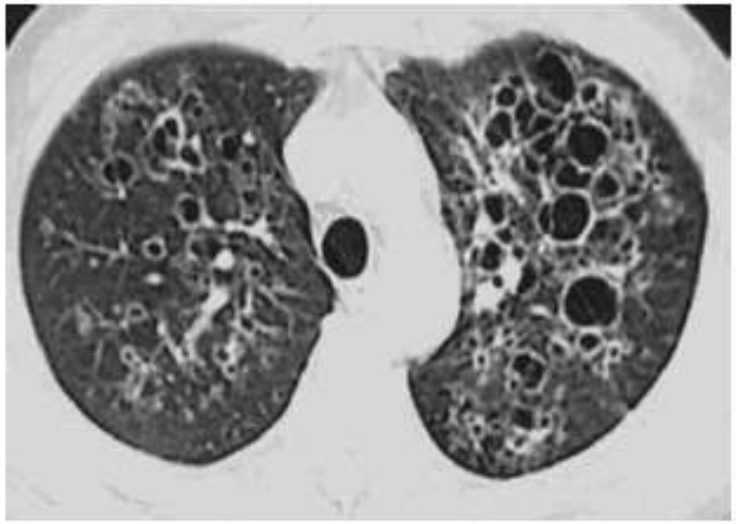


Fig. 9. Cystic PJP on HRCT: cystic images in upper lobe and bilateral peripheral small nodules.

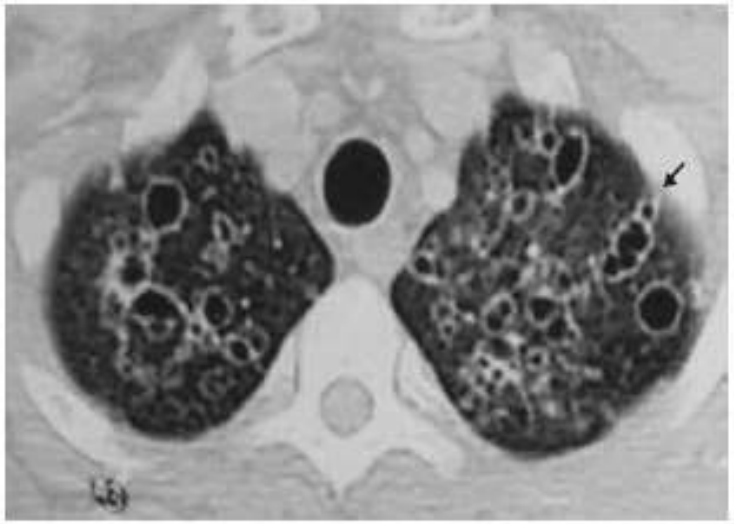


Fig. 10. Progressing cystic PJP on HRCT: cysts become confluent and extend to the periphery (arrow).

PJP

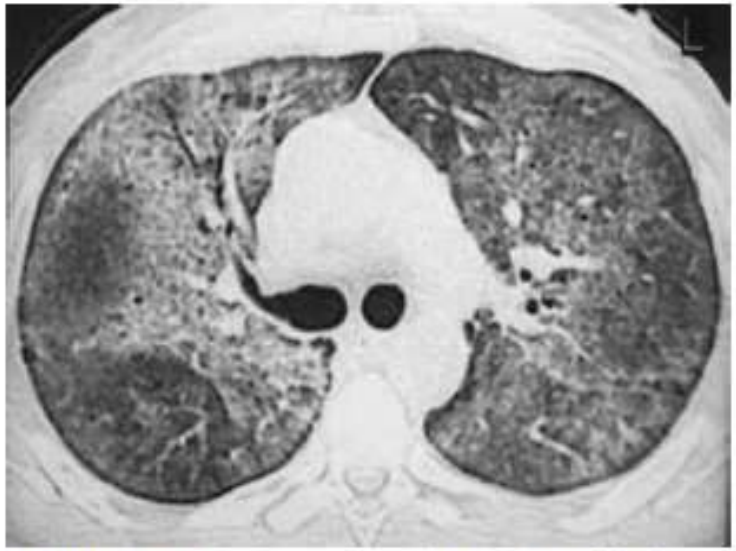


Fig. 11. PJP on HRCT: ground-glass patchy areas, of perihilar location in both upper lobes.

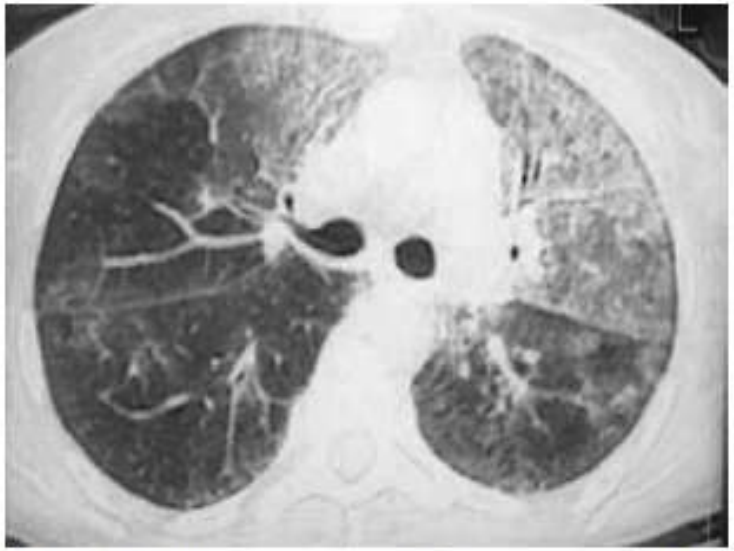


Fig. 12. PJP on HRCT: ground-glass infiltrate predominantly in both upper lobes.

KAPOSİ SARKOMU

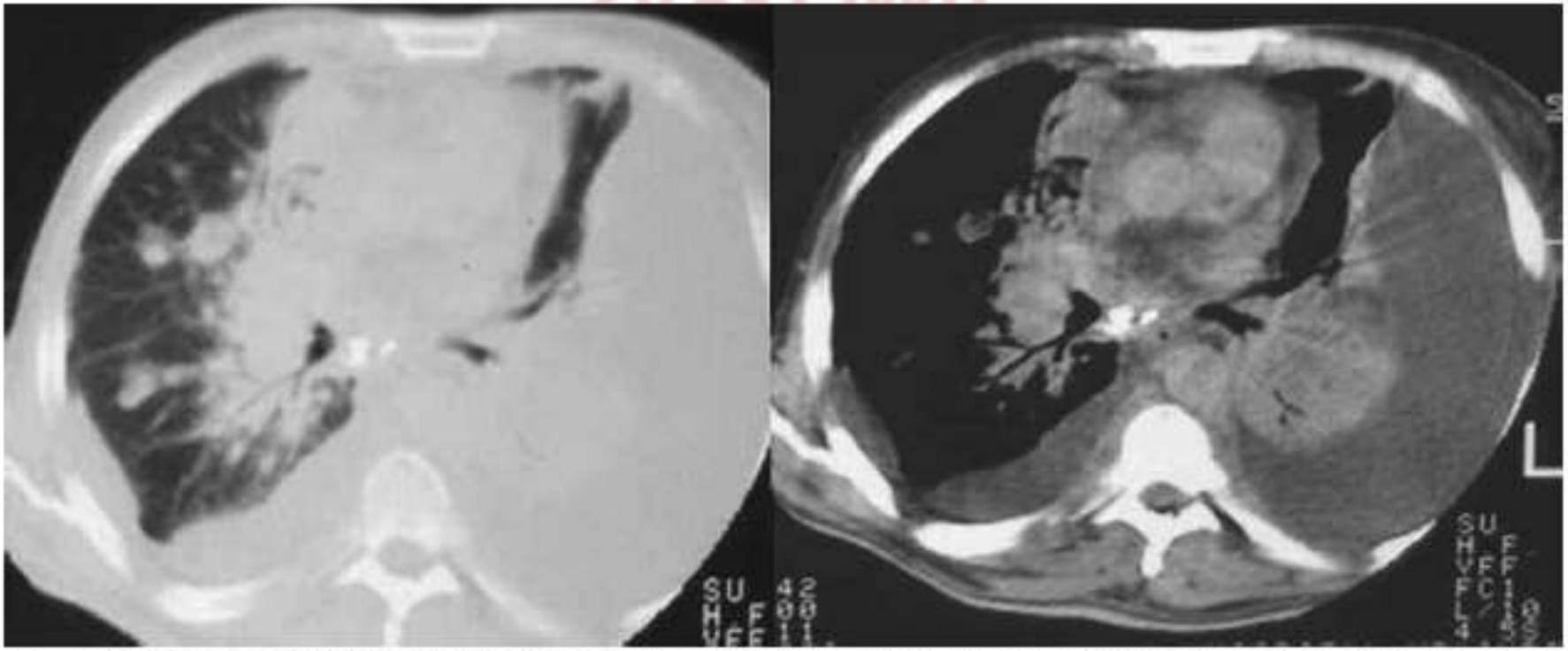


Fig. 21. Kaposi Sarcoma with bilateral pleural effusion on CT scan: a) pulmonary window: peribronchial thickening and nodules on the right side. B) mediastinal window: calcified subcarinal and right hilar lymph node enlargement.

Kaposi sarkomu olgularının %10'unda cilt tutulumu olmadan sadece iç organlar tutulabilir!!!

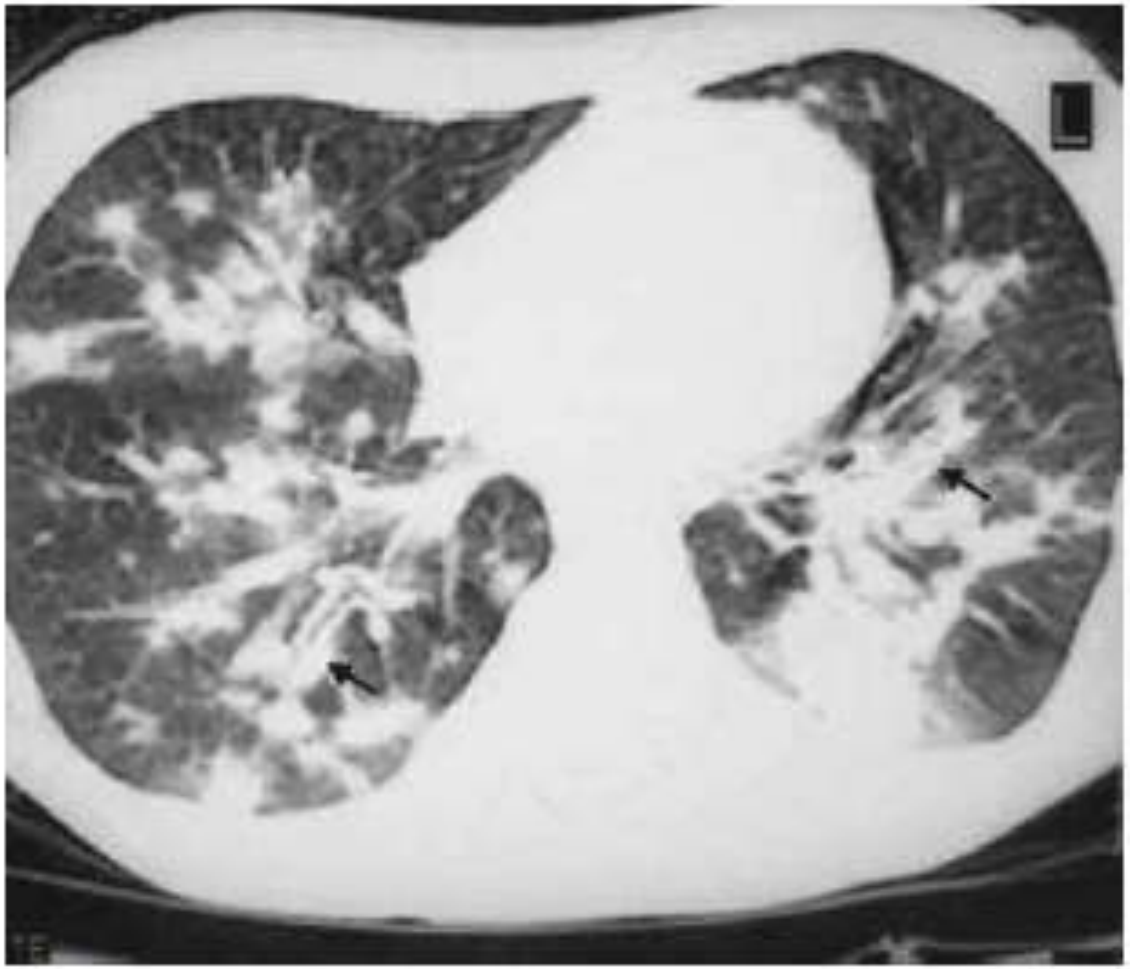


Fig. 20. Kaposi's Sarcoma on HRCT: peribronchial thickening and nodules of bilateral peribronchovascular distribution, mimicking air bronchogram (arrows).

KAPOSİ SARKOMU

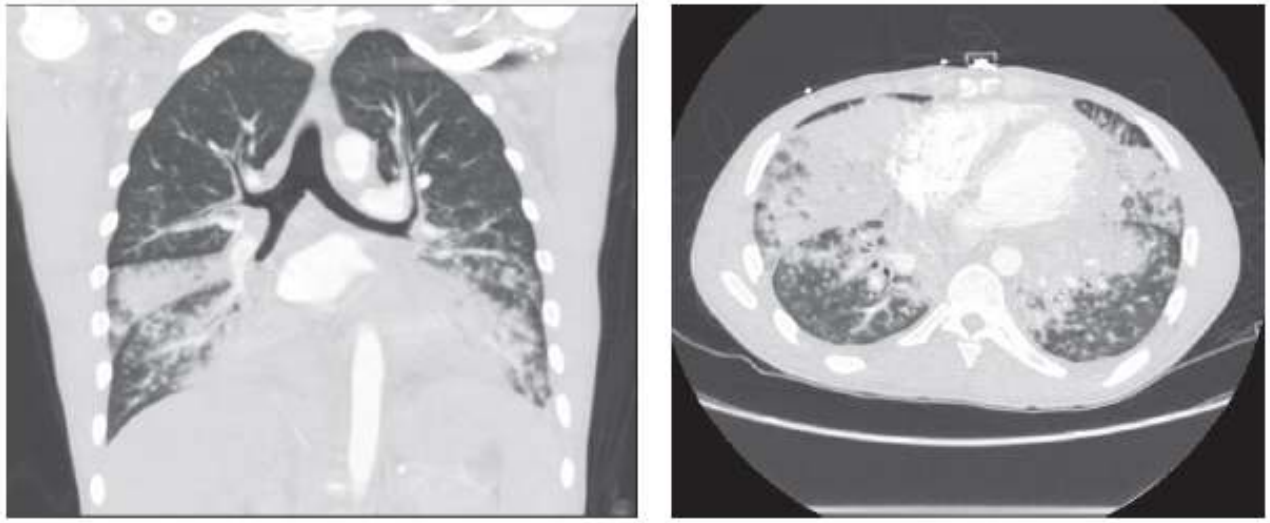
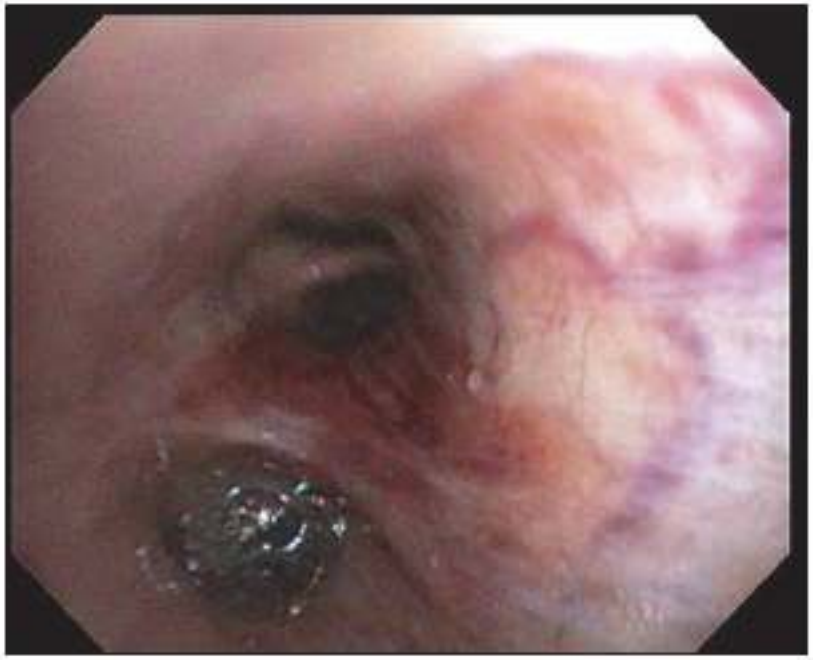


FIGURE 1: CT of chest with contrast: coronal and axial views showing fibronodular infiltrates with consolidation in the right middle and lower lobes and left upper and lower lobes.

KAPOSİ SARKOMU



Right lower lobe bronchus showing violaceous raised mucosal lesions.

Lenfoma

- AIDS ilişkili lenfomaların %10'unda akciğer tutulumu mevcut.
- Sistemik hastalığın bir parçası olarak tutulabileceği gibi nadir de olsa başka bölge tutulumu olmadan sadece primer pulmoner lenfoma olarak da seyredebilir.

LENFOMA

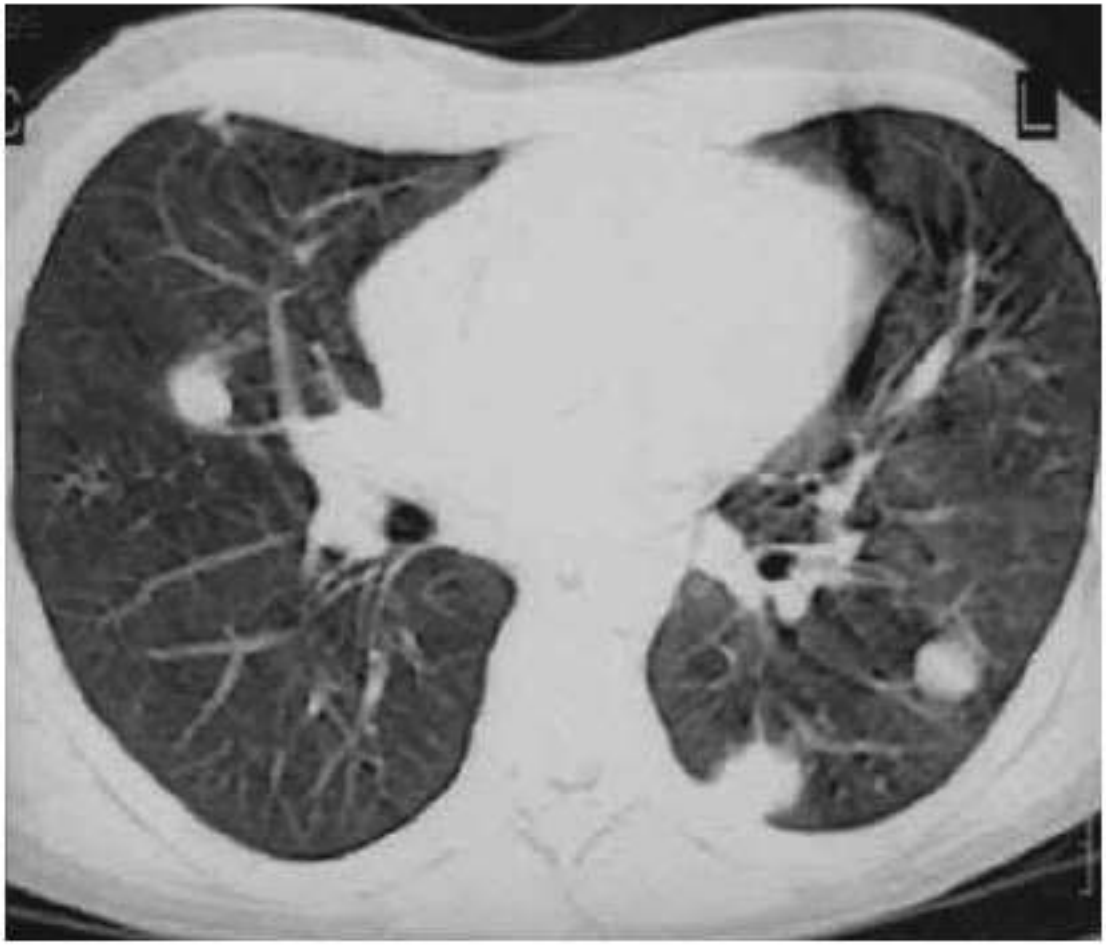


Fig. 22 Lymphoma on CT scan: bilateral basal nodules of well-defined borders.

Nükleer Tıp Görüntüleme
AIDS→^{67}Ga ve ^{201}Tl scan

- Normal anatomik görüntülemelerle KS ve Lenfomayı enfeksiyondan ayırmak her zaman mümkün değildir.

- **KAPOSİ SARKOMU:**

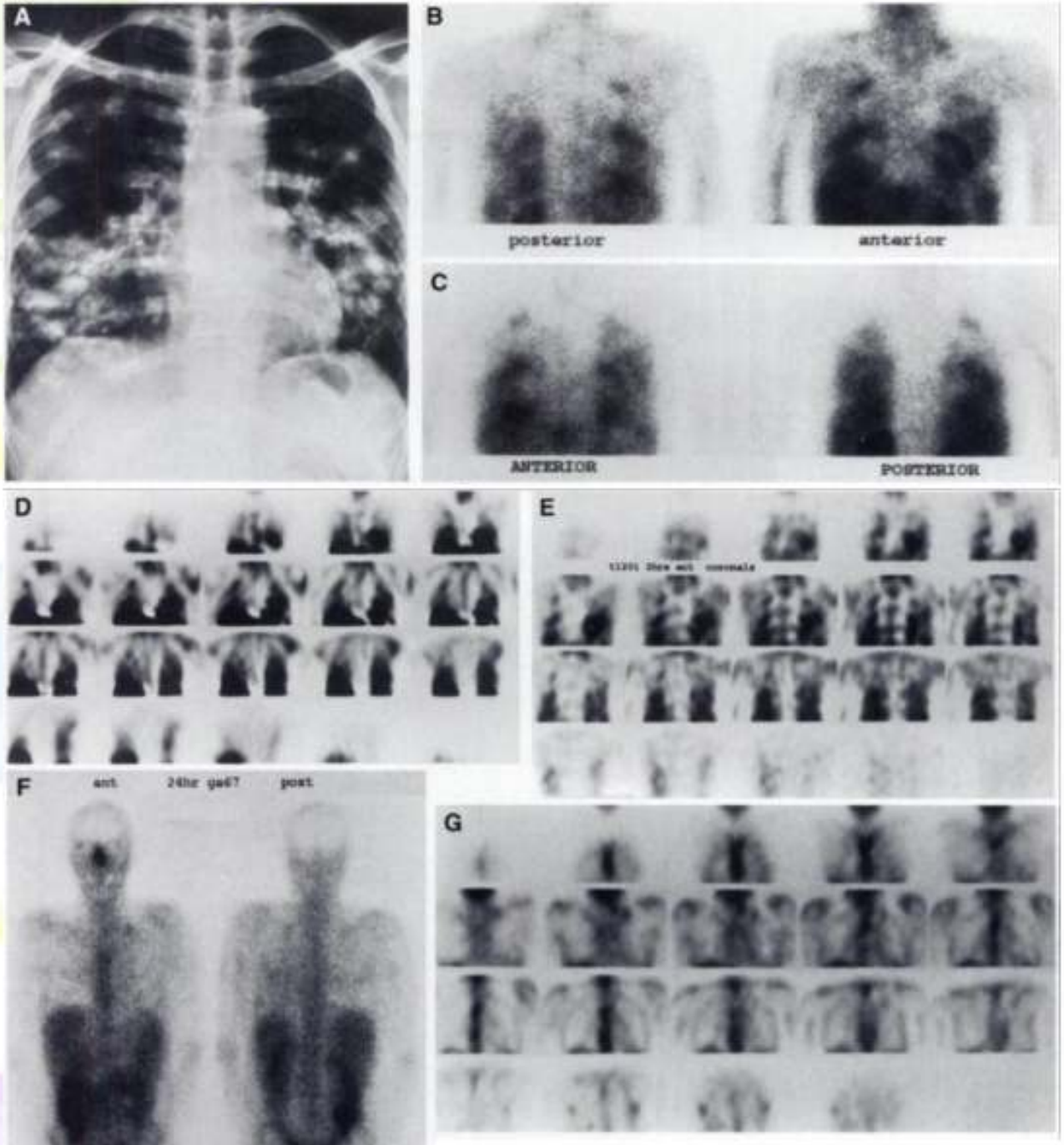
  ^{67}Ga uptake: (-), ^{201}Tl uptake: (+)

- **ENFEKSİYON:**

  ^{67}Ga uptake: (+), ^{201}Tl uptake: (-)

- **LENFOMA:**

  ^{67}Ga uptake: (+), ^{201}Tl uptake: (+)



X-ray →(A)

^{201}Tl scan →(B,C,D,E)

^{67}Ga scan →(F,G)

İshal

- İshal, HIV ile enfekte bireylerde önemli bir morbidite nedenidir.
- Bir çok enfeksiyoz ajan,
- İnfiltratif hastalıklar (lenfoma ve KS)
- Kullanılan ilaçlara bağlı olabilir.

İshal

- ART kullanımına bağlı Enfeksiyoz ishal oranları azalsa da ART ilişkili ishaller hala görülmektedir.
- Enfeksiyon ajanı tespit edilemeyen ileri evre hastalıkta HIV ilişkili enteropati akılda tutulmalıdır.

İshal

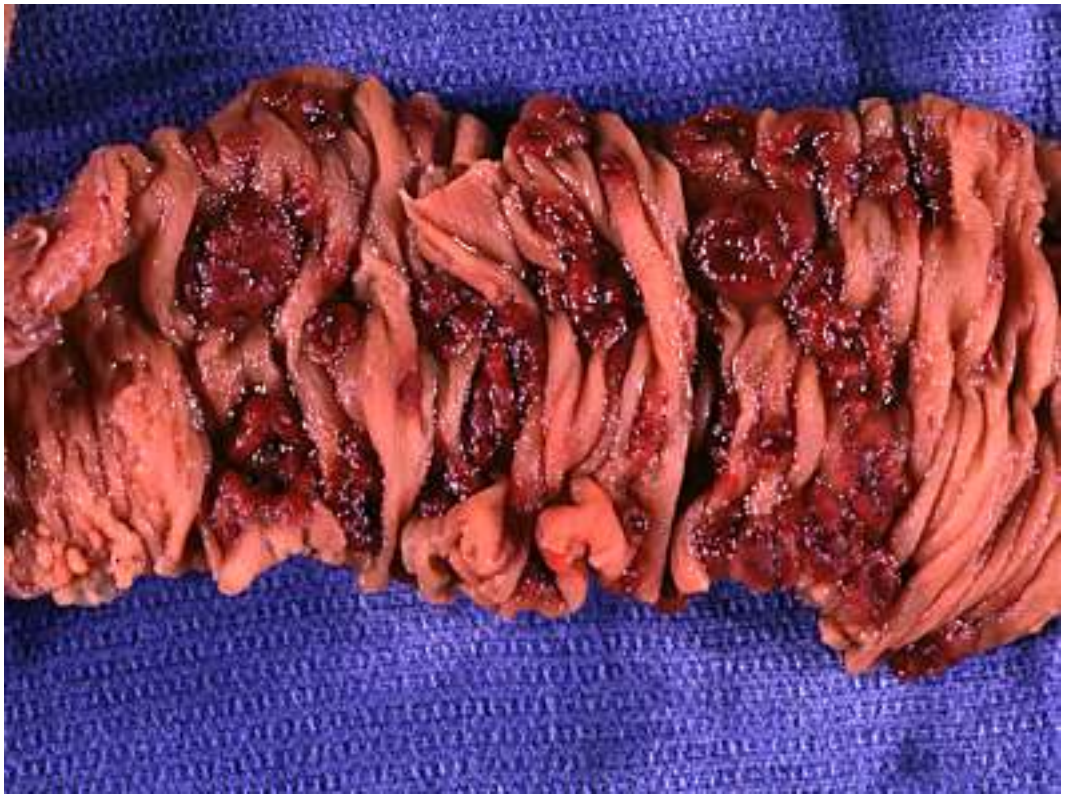
- HIV'e bağlı enteropatide mekanizma halen net anlaşılamamıştır.
- Enterositlerin veya lenfoid dokunun direkt enfeksiyonu ve lokal sitokin üretimininin bozulması?

İshal-ART

- İshal en sık proteaz inhibitörleriyle olmaktadır.
- İntegraz inhibitörleriyle de ilişkili olabilir ama daha nadirdir.
- İshal, eğer nükleoz(t)id ajanların kullanımı ile ilişkili ise, mitokondriyal toksisiteye bağlı olabilir. Özellikle birlikteliğinde şişkinlik, bulantı ve hafif karın ağrısı da varsa.

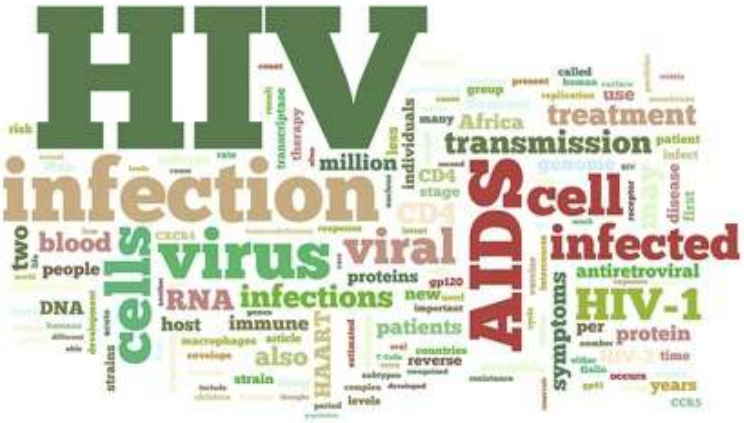
İshal

- GGK pozitifliği varlığı ile birlikte kilo kaybı, Kaposi Sarkomu'nun semptomları olabilir ve kolonoskopide vasküler mukozal lezyon görülebilir.



İshal

- HIV ile enfekte bireylerde sıklıkla bulunan çinko eksikliği, patojen negatif ishallerle ilişkili bulunmuştur.
- Fakat çinko replasmanı yapılan HIV ile enfekte hastalarda yapılan randomize kontrollü bir çalışmada ishal süresi ve remisyon üzerine etkisi bulunmamıştır.


HIV
infection
AIDS
cell
virus
cells
viral
infected
transmission
treatment
blood
people
RNA
infections
DNA
host
immune
patients
HIV-1
protein
antiretroviral
symptoms
proteins
HAART
also
reverse
Africa
million
individuals
CD4
two


thank you
danke
謝謝
ngiyabonga
teşekkür ederim
gracias
спасибо
dank je
tapadh leat
bedankt
dziękuję
hvala
mochchakkeram
go raibh maith agat
brigado
sukriya
kop khun krap
arigatō
takk
dakujem
grazie
merci
мерси
terima kasih
감사합니다
ευχαριστώ