ATEŞLİ ÇOCUĞA YAKLAŞIM

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Ankara Üniversitesi Tıp Fakültesi
Çocuk Enfeksiyon Hastalıkları Bilim Dalı

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Ateş

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THE OFFICIAL NEWSMAGAZINE OF THE AMERICAN ACADEMY OF PEDIATRICS

AAP News

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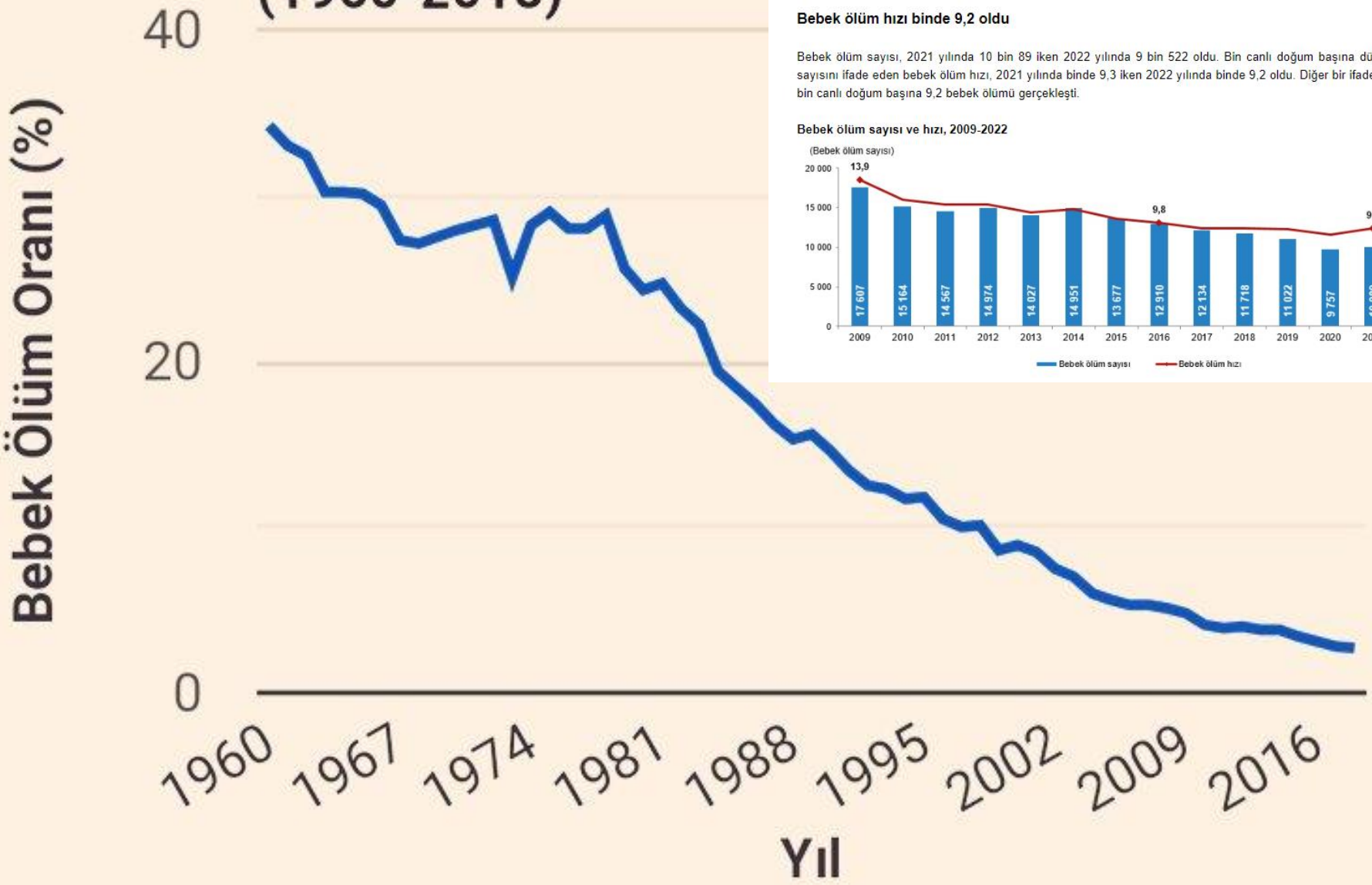
Fighting 'fever phobia'

Fever, in and of itself, is not known to endanger a generally healthy child and actually may be beneficial. Still, many caregivers panic when they see the number on the thermometer rise past 98.6 degrees and rush to give their child acetaminophen or ibuprofen.

A new AAP clinical report addresses the state of knowledge about antipyretic usage in children, including common concerns, indications, treatment goals, single or combination therapy, and instructions for caregivers. It also highlights the need to educate patients and families about fever and "fever phobia."

See story on page 8.

Grafik 4d: Yıllara Göre Türkiyede Ölümler İçinde Bebek (0 Yaş) Ölüm Oranı (%) (1960-2018)



Bebek ölüm hızı binde 9,2 oldu

Bebek ölüm sayısı, 2021 yılında 10 bin 89 iken 2022 yılında 9 bin 522 oldu. Bin canlı doğum başına düşen bebek ölüm sayısını ifade eden bebek ölüm hızı, 2021 yılında binde 9,3 iken 2022 yılında binde 9,2 oldu. Diğer bir ifade ile 2022 yılında bin canlı doğum başına 9,2 bebek ölümü gerçekleşti.

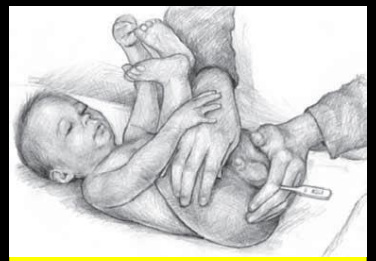
Bebek ölüm sayısı ve hızı, 2009-2022

ATEŞ NEDİR?

Vücut sıcaklığının kontrollü bir biçimde normalin üstüne çıkmasıdır.

TERMOMETRELER

- Cıvalı Termometreler
- Dijital termometreler
  - Digital çok amaçlı termometre
  - Temporal arter termometresi
  - Timpanik termometre
- Plastik Şerit Termometreler
- Giyilebilir Termometreler



Rektal

Oral

Aksiller

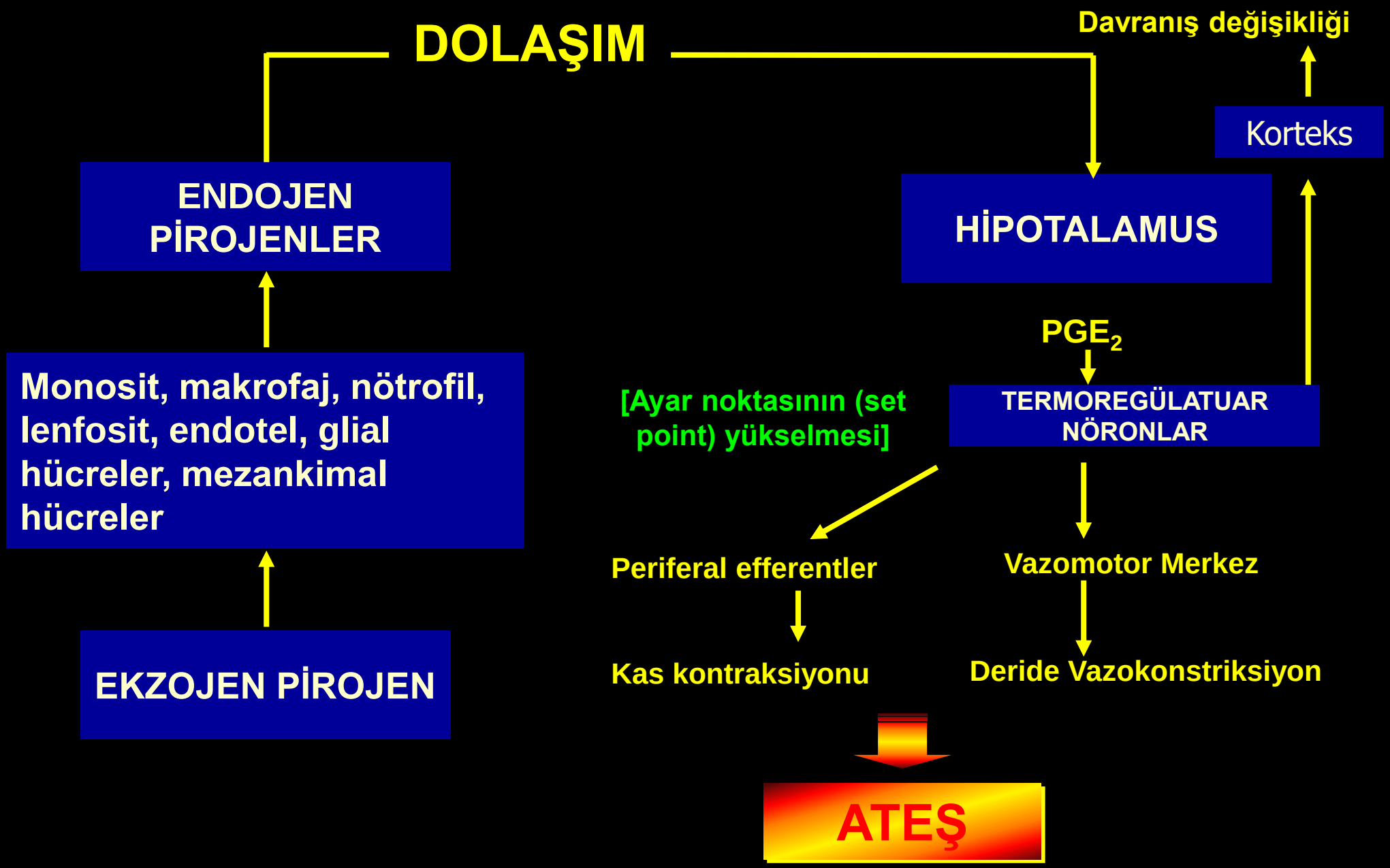
Temporal (Alın)

Giyilebilir Termometre

Timpanik

VÜCUT SICAKLIĞININ HANGİ DEĞERLERİN ÜSTÜNE ÇIKMASI ATEŞ OLARAK KABUL EDİLİR?

- **Aksiller** > 37.2ºC
- **Oral** > 37.8ºC
- **Rektal** ≥ 38ºC
- **Timpanik** > 38ºC (Rektal mod) >37.5ºC (Oral mod)
- **Alın** > 38ºC


DOLAŞIM
Davranış değişikliği
Korteks
ENDOJEN PİROJENLER
HİPOTALAMUS
Monosit, makrofaj, nötrofil, lenfosit, endotel, glial hücreler, mezankimal hücreler
PGE2
[Ayar noktasının (set point) yükselmesi]
TERMOREGÜLATUAR NÖRONLAR
Periferal efferentler
Vazomotor Merkez
Kas kontraksiyonu
Deride Vazokonstriksiyon
EKZOJEN PİROJEN
ATEŞ

Ateş, vücudun zararlı etkenlere karşı geliştirdiği adaptif bir yanıttır.

Vücut sıcaklığı arttığında:

1. **İnflamasyon sistemi daha iyi çalışır**
2. **Mikrobiyal çoğalma hızı azalır**

ATEŞ, ORGANİZMANIN YARARINA İŞLEV GÖRÜR

ATEŞİN NEDEN OLDUĞU DEĞİŞİKLİKLER

Metabolik hızda artma

Oksijen tüketimde artma

Karbondioksit üretiminde artma

Kardiyak output artışı

Solunum iş yükünde artma

Konvulsiyon eşiğinde düşme


Ouuu... Bu hakkaten canımı yakacak.

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Volume 32 • Number 3
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Fever! Fever! Fever!

Clinical report addresses educating parents to reduce 'fever phobia'

by Hank Farrar, M.D., FAAP, and Janice E. Sullivan, M.D., FAAP

Although many parents administer antipyretics to a child with minimal or no fever, this report emphasizes that the primary goal of treating the febrile child should be improvement of the child's overall comfort rather than normalization of body temperature.

It is 3 a.m. and you get your third call of the night about a child with fever. A parent asks about giving antipyretics prior to routine immunizations. You are educating first-time parents about fever prior to discharge of their infant from the newborn nursery. These scenarios are common in everyday practice.

Fever accounts for one-third of all presenting conditions in children. What guidance is available to pediatricians and pediatric health care providers regarding fever treatment or prophylaxis and education for parents/caregivers?

A new AAP clinical report, *Fever and Antipyretic Use in Children*, summarizes recommendations and controversies related to the use of antipyretics in pediatrics (*Pediatrics.* 2011;127:580-587). The report, from the AAP Section on Clinical Pharmacology and Therapeutics and the Committee on Drugs, addresses the state of knowledge about antipyretic usage in pediatric patients, including common concerns, indications, treatment goals, single or combination therapy, and instructions for caregivers. Limited evidence-based information is available regarding antipyretic therapy, combination therapy and the role of fever in the natural history of an illness.

Need to educate

The report highlights the need to educate patients and families about fever and "fever phobia."

Fever is a physiological mechanism that has beneficial effects in fighting infection. Fever, in and of itself, is not known to endanger

of an illness or that it causes long-term neurological complications. Possible exceptions may be children with certain underlying chronic disease (i.e., myocardial dysfunction or heart failure) or acute illness (i.e., acute myocarditis, shock, etc.) that may result in limited tolerance of the increased metabolic demands caused by a fever.

Many physicians continue to encourage the use of antipyretics, believing that most benefits result from improved comfort and the accompanying improvements in activity and feeding, less irritability, and a more reliable sense of the child's overall clinical condition.

Guidelines for the symptomatic management of fever in children: systematic review of the literature and quality appraisal with AGREE II

Elena Chiappini, Barbara Bortone, Luisa Galli, Maurizio de Martino

BMJ Open 2017;**7**:e015404.

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Italian Pediatric Society (SIP)
South African
National Institute for Health and Care Excellence (NICE)
New South Wales Ministry of Health (NSW)
South Australian Ministry of Health (SA)
World Health Organization (WHO)

Common messages

1. Antipyretics are indicated only in cases of discomfort associated with fever and not with the sole aim of reducing body temperature.
2. Recommended antipyretics are paracetamol or ibuprofen, according to the child's age, weight and characteristics.
3. The use of antipyretics does not prevent either febrile convulsions or reactions to vaccines.
4. Tepid sponging and alcoholic baths are not recommended for the treatment of fever.
5. The use of cough and cold medicine is discouraged because of the risks of overdoses and interactions.
6. Caution is recommended using antipyretics in chronic diseases such as pre-existing hepatic and renal impairment or in cases of diabetes, cardiac disease and severe malnutrition.
7. In asthmatic children with fever, paracetamol does

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ÜSTÜNDE UZLAŞILMIŞ MESAJLAR

1. Ateş düşürücüler, sadece ateşe bağlı rahatsızlık durumunda kullanılmalıdır, amaç yalnızca vücut sıcaklığını normale düşürmek değildir.

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ÜSTÜNDE UZLAŞILMIŞ MESAJLAR

2. Önerilen ateş düşürücüler, çocuğun yaşına, kilosuna ve özelliklerine göre verilen Parasetamol veya İbuprofendir.

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ÜSTÜNDE UZLAŞILMIŞ MESAJLAR

3. Ateş düşürücülerin kullanımı, ateşli havaleleri veya aşılara karşı reaksiyonları önlemez.

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ÜSTÜNDE UZLAŞILMIŞ MESAJLAR

4. Ateşin tedavisi için ılık uygulama ve alkollü banyolar önerilmez.

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5. Öksürük ve soğuk algınlığı ilaçlarının kullanımı, doz aşımı ve ilaç etkileşim riskleri nedeniyle, önerilmez.

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6. Ateş düşürücülerin önceden var olan karaciğer ve böbrek yetmezliği gibi kronik hastalıklarda veya diyabet, kalp hastalığı ve şiddetli malnütrisyon durumlarında dikkatli kullanılması önerilir.

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ÜSTÜNDE UZLAŞILMIŞ MESAJLAR

7. Ateşi olan astımlı çocuklarda Parasetamol astım semptomlarını kötüleştirmiyor gibi görünmektedir.

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ATEŞİN TEDAVİSİ

Çocuklarda ateş tedavisinde birinci basamak ilaç parasetamoldür.

T.C. Sağlık Bakanlığı
Kanıta Dayalı Tıp Rehberi

İlaç tedavisi

Antipiretik ilaçlar sadece gerektiği durumda kullanılmalıdır.

Birinci basamak ilaç parasetamoldür.

Tek doz 15 mg/kg, maksimum doz 60 mg/kg/24 saat. İlaç uygulandıktan sonra bir iki saat içinde sıcaklık 1,5 ºC azalır. Etki süresi 5–6 saattir.

Çocuklarda kullanım için uygun diğer antipiretikler: Ibuprofen (>6 kg) ve naproksen (>12 ay). Bunların antipiretik etkisi en az parasetamol kadar iyidir ve etki süresi daha uzundur.

Aspirin (asetilsalisilik asit) çocuklarda antipiretik ilaç olarak kullanılmamalıdır; çünkü kullanımı Reye sendromu riskini artırır.

ATEŞİN TEDAVİSİ

	Parasetamol[1,2]	Ibuprofen[3-6]
Endikasyon	Çocuklarda hafif ve orta şiddetli ağrılar ile ateşin semptomatik tedavisi	6 ay ve üzerindeki çocuklarda ateşin düşürülmesi ve hafif ve orta derecedeki ağrıların giderilmesi amacıyla kısa süreli olarak
Yaş	3 ay ve üzeri çocuklarda[1*]	6 ay ve üzeri çocuklarda (> 7 kg)
GİS yan etkiler	**Yaygın:** Bulantı, diyare, dispepsi, flatulans, karın ağrısı, konstipasyon, kusma	**Yaygın:** Dispepsi, diyare, bulantı, kusma, abdominal ağrı, flatulans, konstipasyon, melana, hematemez, **gastrointestinal hemoraji**[2*]
Astımlı çocuklarda	**Çok seyrek:** Bronkospazm[3*]	Geçmişinde veya halen bronşiyal astım öyküsü bulunan hastalarda bronkospazm gelişmesini tetikleyebilir.[3*]
Kanama zamanı	Parasetamol ile varfarin veya kumarin (antikoagülant) türevleri arasındaki etkileşimler, INR* değerinde bir artışa ve kanama riskinde bir artışa neden olabilir.[4*]	Diğer NSAİİ'ler gibi, trombosit agregasyonunun inhibe edebilir ve kanama zamanını uzatabilir.

ATEŞİN TEDAVİSİ

ANTİPİRETİK İLAÇ TEDAVİSİ

Parasetamol	**10-15 mg/kg/doz, 4-6 saatte bir**
İbuprofen	**5-10 mg/kg/doz, 6-8 saatte bir**

ATEŞİN TEDAVİSİ

ANTİPİRETİK İLAÇ TEDAVİSİ

Parasetamol 10-15 mg/kg/doz, 4-6 saatte bir

İbuprofen 5-10 mg/kg/doz, 6-8 saatte bir

Ketoprofen

Aspirin

Metamizol

Nimesulid

ATEŞİN TEDAVİSİ

NEDENE YÖNELİK TEDAVİ

Enfeksiyonun tedavisi

Hastalığa özgü tedavi

ODAĞI BİLİNMEYEN AKUT ATEŞ

GROUP	MANAGEMENT
Any toxic-appearing child 0-36 mo and temperature ≥38°C (100.4°F)	Hospitalize, broad cultures plus other tests,* parenteral antibiotics
Child <1 mo and temperature ≥38°C (100.4°F)	Hospitalize, broad cultures plus other tests,* parenteral antibiotics
Child 1-3 mo and temperature ≥38°C (100.4°F)	Two-step process 1. Determine risk based on history, physical examination, and laboratory studies. Low risk: • Uncomplicated medical history • Normal physical examination • Normal laboratory studies • Urine: negative leukocyte esterase, nitrite and <10 WBC/HPF • Peripheral blood: 5,000-15,000 WBC/mm^3; <1,500 bands or band: total neutrophil ratio <0.2 • Stool studies if diarrhea (no RBC and <5 WBC/HPF) • CSF cell count (<8 WBC/μL) and negative Gram stain • Chest radiograph without infiltrate 2. If child fulfills all low-risk criteria, administer no antibiotics, ensure follow-up in 24 hr and access to emergency care if child deteriorates. Daily follow-up should occur until blood, urine, and CSF cultures are final. If any cultures are positive, child returns for further evaluation and treatment. If child does not fulfill all low-risk criteria, hospitalize and administer parenteral antibiotics until all cultures are final and definitive diagnosis determined and treated
Child 3-36 mo and temperature 38-39°C (100.4-102.2°F)	Reassurance that diagnosis is likely self-limiting viral infection, but advise return with persistence of fever, temperatures >39°C (102.2°F), and new signs and symptoms
Child 3-36 mo and temperature >39°C (102.2°F)	Two-step process: 1. Determine immunization status 2. If received conjugate pneumococcal and *Haemophilus influenzae* type b vaccines, obtain urine studies (urine WBC, leukocyte esterase, nitrite, and culture) for all girls, all boys <6 mo old, all uncircumcised boys <2 yr, all children with recurrent urinary tract infections If did not receive conjugate pneumococcal and *H. influenzae* type b vaccines, manage according to the 1993 Guidelines (see Baraff et al. *Ann Emerg Med* 22:1198-1210, 1993.)

*Other tests may include chest radiograph, stool studies, herpes simplex polymerase chain reaction.
CSF, cerebrospinal fluid; HPF, high-powered field; RBC, red blood cell; WBC, white blood cell.

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*Other tests may include chest radiograph, stool studies, herpes simplex polymerase chain reaction.
CSF, cerebrospinal fluid; HPF, high-powered field; RBC, red blood cell; WBC, white blood cell.

CLINICAL PRACTICE GUIDELINE

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Evaluation and Management of Well-Appearing Febrile Infants 8 to 60 Days Old

Robert H. Pantell, MD, FAAP,[a] Kenneth B. Roberts, MD, FAAP,[b] William G. Adams, MD, FAAP,[c] Benard P. Dreyer, MD, FAAP,[d] Nathan Kuppermann, MD, MPH, FAAP, FACEP,[e] Sean T. O'Leary, MD, MPH, FAAP,[f] Kymika Okechukwu, MPA,[g] Charles R. Woods Jr, MD, MS, FAAP[h] SUBCOMMITTEE ON FEBRILE INFANTS

To cite: Pantell RH, Roberts KB, Adams WG, et al. Clinical Practice Guideline: Evaluation and Management of Well-Appearing Febrile Infants 8 to 60 Days Old. *Pediatrics*. 2021;148(2):e2021052228

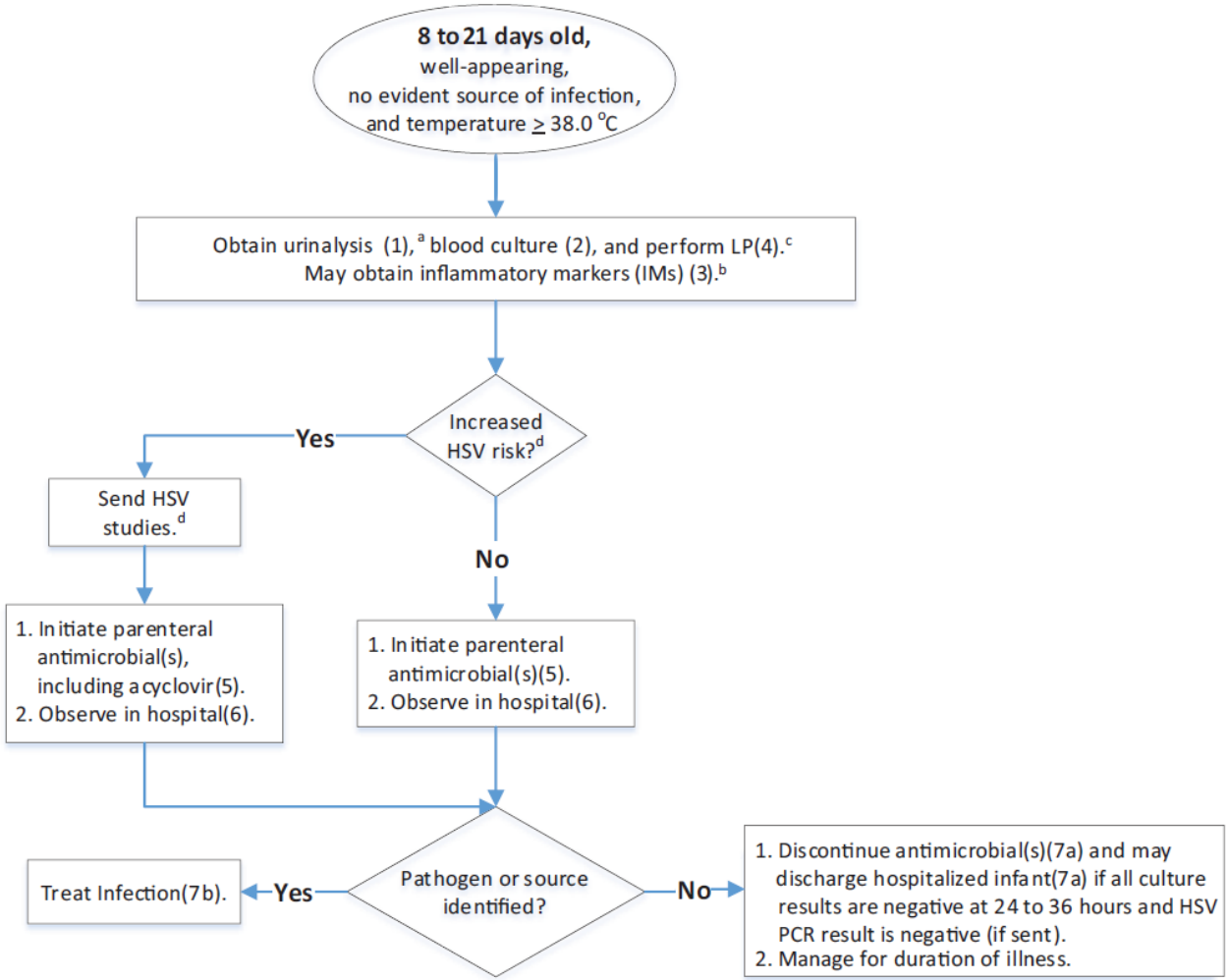
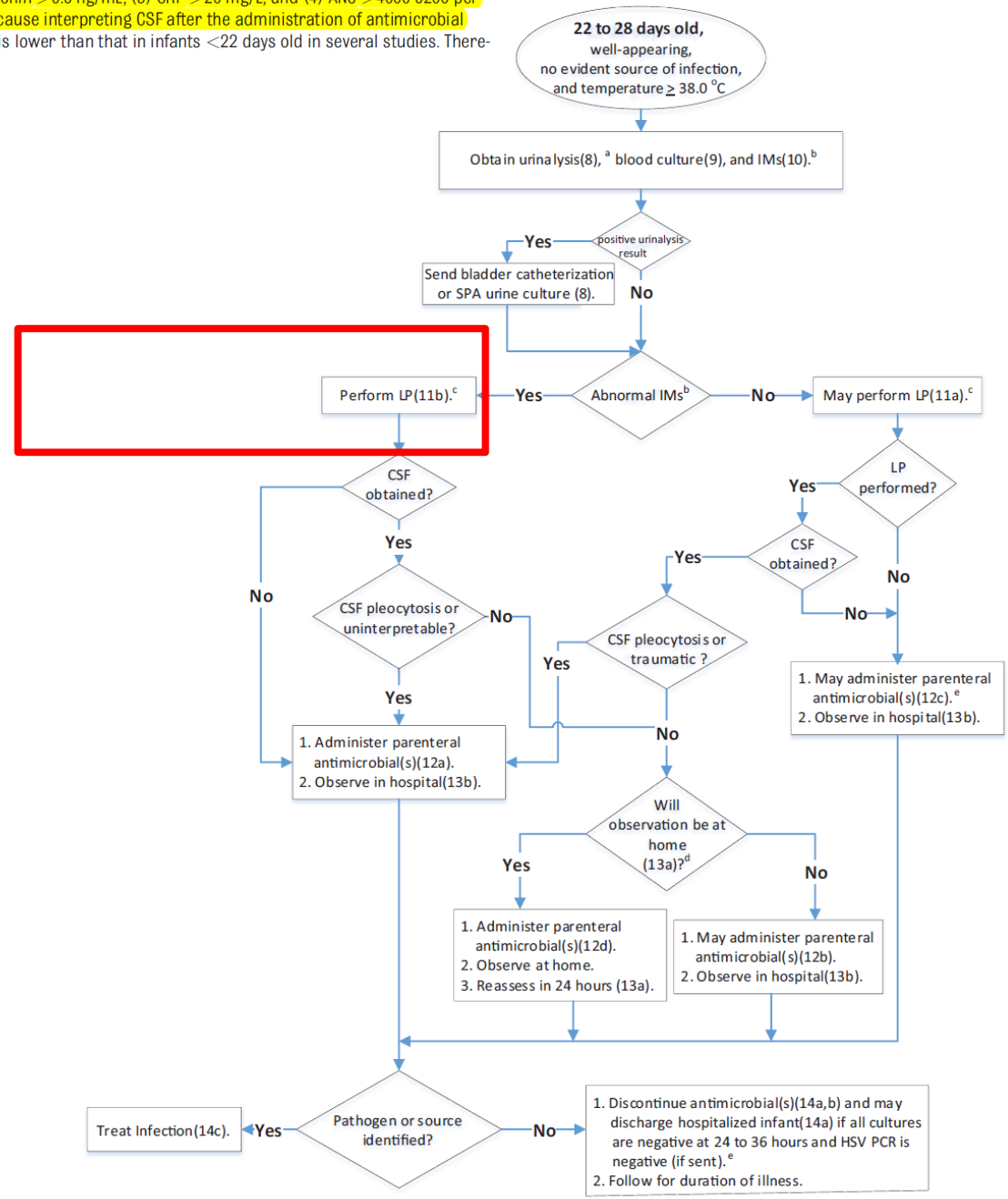


FIGURE 1 Algorithm for 8- to 21-day-old infants. [a] KAS references are shown in parentheses. [b] Laboratory values of inflammation are considered elevated at the following levels: (1) procalcitonin >0.5 ng/mL, (2) CRP >20 mg/L, and (3) ANC >4000 to 5200 per mm^3. Although we recommend all infants in this age group have a complete sepsis workup, receive parenteral antimicrobial agents, and be monitored in a hospital, knowing IM results can potentially guide ongoing clinical decisions. [c] Send CSF for cell count, Gram stain, glucose, protein, bacterial culture, and enterovirus PCR (if available) if pleocytosis is present and during periods of increased local enterovirus prevalence. [d] HSV should be considered when there is a maternal history of genital HSV lesions or fevers from 48 hours before to 48 hours after delivery and in infants with vesicles, seizures, hypothermia, mucous membrane ulcers, CSF pleocytosis in the absence of a positive Gram stain result, leukopenia, thrombocytopenia, or elevated alanine aminotransferase levels. For further discussion, see the current *Red Book*. Recommended HSV studies are CSF PCR; HSV surface swabs of the mouth, nasopharynx, conjunctivae, and anus for an HSV culture (if available) or PCR assay; alanine aminotransferase; and blood PCR.

FIGURE 2 Algorithm for 22- to 28-day-old infants. [a] KAS references are shown in parentheses. [b] If available, procalcitonin should be obtained along with ANC or CRP. If procalcitonin is unavailable, both ANC and CRP should be obtained, and a temperature >38.5°C is considered abnormal. IMs are considered abnormal at the following levels: (1) temperature >38.5°C, (2) procalcitonin >0.5 ng/mL, (3) CRP >20 mg/L, and (4) ANC >4000 5200 per mm^3. [c] LP is recommended before administration of antimicrobial agents because interpreting CSF after the administration of antimicrobial agents is difficult. However, the risk of meningitis in 22- to 28-day-old infants is lower than that in infants <22 days old in several studies. There-



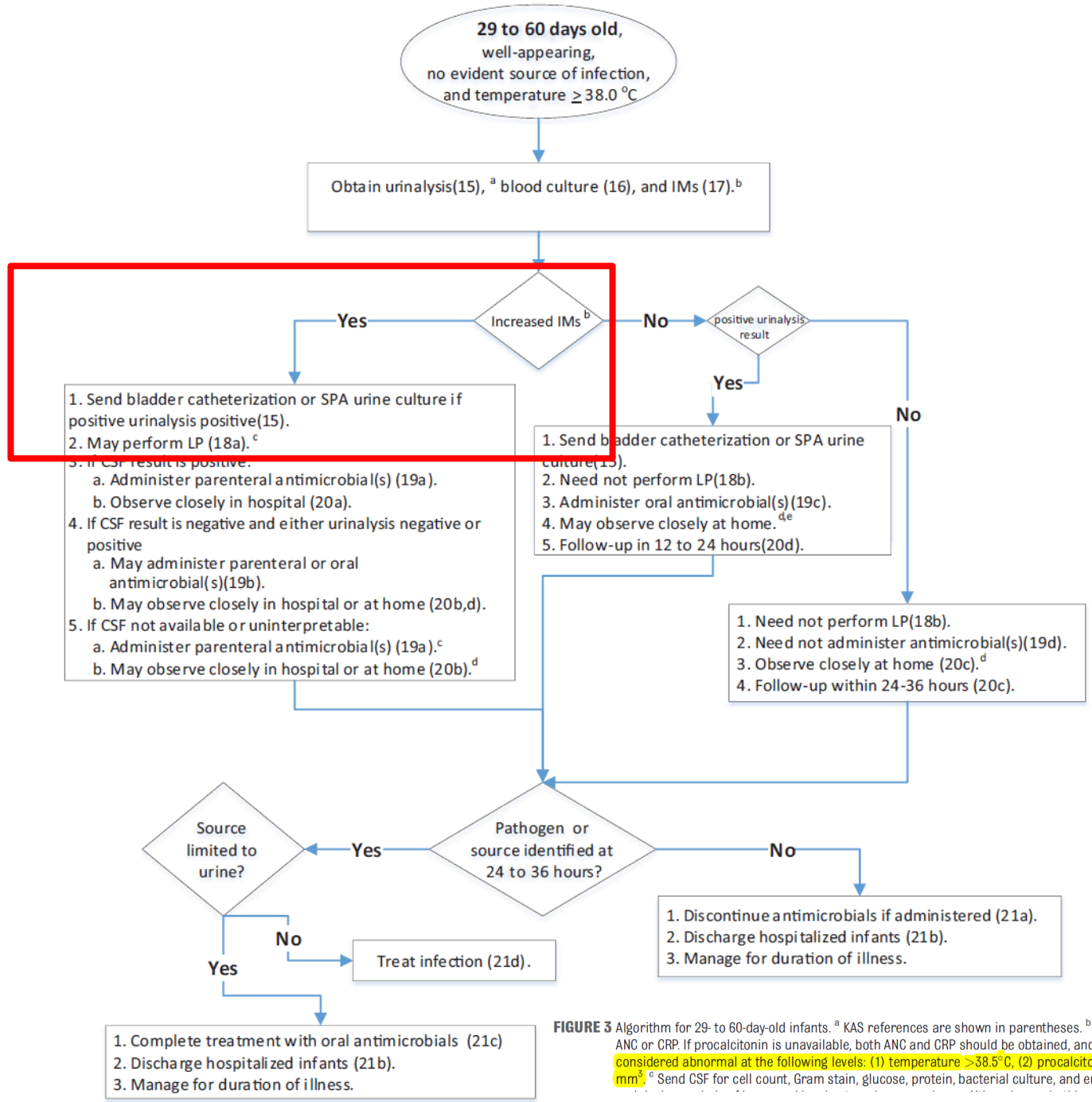


FIGURE 3 Algorithm for 29- to 60-day-old infants. [a] KAS references are shown in parentheses. [b] If available, procalcitonin should be obtained along with ANC or CRP. If procalcitonin is unavailable, both ANC and CRP should be obtained, and a temperature >38.5°C is considered abnormal. IMs are considered abnormal at the following levels: (1) temperature >38.5°C, (2) procalcitonin >0.5 ng/mL, (3) CRP >20 mg/L, (4) ANC >4000 to 5200/mm^3. [c] Send CSF for cell count, Gram stain, glucose, protein, bacterial culture, and enterovirus PCR (if available) if CSF pleocytosis is present


Ateş

NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ

İlk kez 1961 yılında Petersdorf ve Beeson

1. En az üç hafta süren
2. Bir hafta süreyle hastanede yapılan incelemelere karşın nedeni belirlenemeyen
3. Belgelenmiş 38.3 ºC üzerinde ateş

NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ
Çocuklarda Nedenler

YAZAR Hasta sayısı	*Enfeksiyonlar*	*Malignite*	*KDH*	*Diğer*	*Tanı konulamayan*
Pizzo 100	**%52**	**%6**	**%20**	**%10**	**%12**
McLung 99	**%29**	**%8**	**%11**	**%19**	**%33**
Lohr 54	**%33**	**%13**	**%20**	**%15**	**%8**
Mouaket 221	**%78**	**%2**	**%3**	**%0**	**%15**
Steele 109	**%22**	**%2**	**%6**	**%3**	**%67**
Çiftçi 102	**%44.2**	**%11.7**	**%6.8**	**%24.5**	**%12.8**

Annals of Tropical Paediatrics (2003) 23, 259–263

Pyrexia of unknown origin in children: a review of 102 patients from Turkey

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(Accepted July 2003)

Summary Pyrexia of unknown origin (PUO) has not been appropriately investigated in Turkish children and therefore a study was undertaken to determine the causes of PUO and to evaluate which clinical procedures are useful in establishing a diagnosis. A total of 102 children fitting the classical PUO criteria seen in our clinic between 1995 and 2002 were investigated retrospectively. Infections, collagen vascular disorders, malignancy and miscellaneous conditions constituted 44.2%, 6.8%, 11.7% and 24.5% of cases, respectively, while 12.8% of the cases remained undiagnosed. Enteric fever, brucellosis and respiratory tract infections were the most commonly encountered infections, whereas familial Mediterranean fever was the commonest non-infectious disorder. Biopsy, aspiration, serology, bacteriology, radiology and observation of the clinical course were the most useful diagnostic procedures.

NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ

İlk kez 1961 yılında Petersdorf ve Beeson

1. En az üç hafta süren
2. Bir hafta süreyle hastanede yapılan incelemelere karşın nedeni belirlenemeyen
3. Belgelenmiş 38.3 ºC üzerinde ateş

NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ

TABLE 56-1 Summary of Definitions and Major Features of the Four Subtypes of Fever of Unknown Origin (FUO)

	CLASSIC FUO	NOSOCOMIAL (HEALTH CARE–ASSOCIATED) FUO	NEUTROPENIC (IMMUNE-DEFICIENT) FUO	HIV-RELATED FUO
Definition	>38.3° C (100.9° F), >3 wk, >2 visits or 3 days in hospital	>38.3° C (100.9° F), >3 days, not present or incubating on admission	>38.3° C (100.9° F), >3 days, negative cultures after 48 hr	>38.3° C (100.9° F), >3 wk for outpatients, >3 days for inpatients, HIV infection confirmed

Table 177-4 Summary of Definitions and Major Features of the 4 Subtypes of Fever of Unknown Origin

FEATURE	CLASSIC FUO	HEALTHCARE-ASSOCIATED FUO	IMMUNE-DEFICIENT FUO	HIV-RELATED FUO
Definition	>38°C (100.4°F), >3 wk, >2 visits or 1 wk in hospital	≥38°C (100.4°F), >1 wk, not present or incubating on admission	≥38°C (100.4°F), >1 wk, negative cultures after 48 hr	≥38°C (100.4°F), >3 wk for outpatients, >1 wk for inpatients, HIV infection confirmed

NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ
Muayene Bulguları

SYSTEM	FINDING	ASSOCIATED ILLNESS
Abdomen		
	Hepatomegaly	Lymphoma, metastatic carcinoma, relapsing fever, granulomatous hepatitis, hemophagocytic lymphohistiocytosis, Q fever, typhoid fever, viral infections, salmonellosis, brucellosis, bartonellosis, endocarditis, malaria, leukemia
	Liver edge tenderness	Bartonellosis, liver abscess
	Splenic abscess	Infective endocarditis, brucellosis, enteric fever
	Splenomegaly	Leukemia, lymphoma, tuberculosis, brucellosis, infective endocarditis, cytomegalovirus, hemophagocytic lymphohistiocytosis, Epstein-Barr virus, psittacosis, relapsing fever, typhoid fever, Rocky Mountain spotted fever, Kikuchi-Fuijmoto disease
Chest		
	Murmur	Infective endocarditis, atrial myxoma
	Relative bradycardia	Typhoid fever, malaria, leptospirosis, psittacosis, central fever, drug fever
Eyes		
	Abnormal funduscopic examination findings	Miliary tuberculosis, toxoplasmosis, vasculitis
	Conjunctival suffusion	Leptospirosis, relapsing fever, Rocky Mountain spotted fever
	Conjunctivitis	Epstein-Barr virus, Newcastle disease, leptospirosis, Kawasaki disease (limbic sparing), tuberculosis, systemic lupus erythematosus, bartonellosis, chlamydial infection, histoplasmosis, tumor necrosis factor receptor-associated periodic syndrome, familial cold autoinflammatory syndrome
	Decreased pupillary constriction	Hypothalamic or autonomic dysfunction
	Dry eyes	Familial dysautonomia, systemic lupus erythematosus, polyarteritis nodosa, Sjögren syndrome
	Ischemic retinopathy	Polyarteritis nodosa
	Periorbital edema	Tumor necrosis factor receptor-associated periodic syndrome
	Subconjunctival hemorrhage	Endocarditis, trichinosis
	Uveal tract involvement	Tuberculosis, juvenile idiopathic arthritis, toxoplasmosis, sarcoidosis, systemic lupus erythematosus

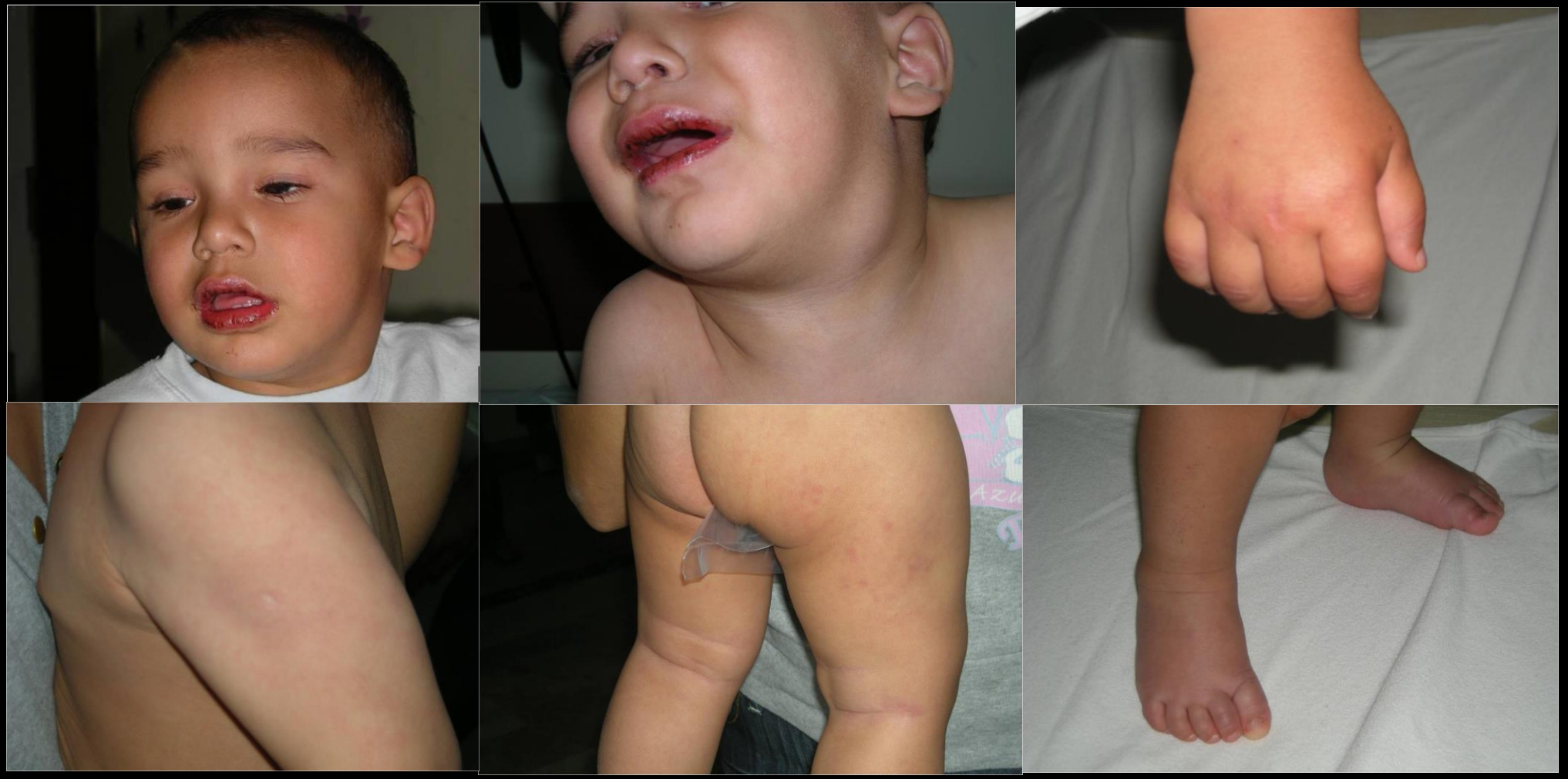
NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ
Muayene Bulguları

SYSTEM	FINDING	ASSOCIATED ILLNESS
Lymph Nodes		
	Lymphadenopathy	Lymphoma, bartonellosis, tuberculosis, lymphogranuloma venereum, cytomegalovirus, Epstein-Barr virus, human immunodeficiency virus, toxoplasmosis, juvenile idiopathic arthritis, brucellosis, Kikuchi-Fuijmoto disease, tularemia, viral infections, mycobacterial infection, leukemia, hyperimmunoglobulin D syndrome, familial cold autoinflammatory syndrome
Genitourinary		
	Epididymo-orchitis	Tuberculosis, lymphoma, brucellosis, leptospirosis, Epstein-Barr virus, blastomycosis, carcinoma
Musculoskeletal		
	Bone tenderness	Osteomyelitis, malignancy, infantile cortical hyperostosis
	Costovertebral tenderness	Chronic pyelonephritis, perinephric abscess
	Hyperactive reflexes	Hyperthyroidism
	Hypoactive reflexes	Familial dysautonomia
	Joint tenderness	Familial Mediterranean fever, rat-bite fever, systemic lupus erythematosus, Lyme disease, lymphogranuloma venereum, brucellosis, hyperimmunoglobulinemia D syndrome, tumor necrosis factor receptor-associated periodic syndrome
	Muscle tenderness	Brucellosis, trichinellosis, arboviral infection, dermatomyositis, polyarteritis, subdiaphragmatic abscess (trapezius tenderness)
	Spinal tenderness	Subacute vertebral osteomyelitis, infective endocarditis, brucellosis, typhoid fever

NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ
Muayene Bulguları

SYSTEM	FINDING	ASSOCIATED ILLNESS
Oropharynx		
	Anomalous dentition	Anhidrotic ectodermal dysplasia
	Dental or fascial abscess	Sinusitis, brain abscess, mediastinal abscess
	Epistaxis	Relapsing fever, leukemia, psittacosis, rheumatic fever
	Gingival hypertrophy	Leukemia, Langerhans cell histiocytosis
	Pharyngeal hyperemia	Cytomegalovirus, Epstein-Barr virus, toxoplasmosis, tularemia, leptospirosis
	Smooth tongue	Familial dysautonomia
	Ulcerations	Behçet disease; periodic fever, aphthous stomatitis, pharyngitis, and adenitis (PFAPA); hyperimmunoglobulin D syndrome
Skin (limited review)		
	Blotchy skin	Familial dysautonomia
	Decreased body hair, hypohidrosis	Anhidrotic ectodermal dysplasia
	Dehydration	Diabetes insipidus, ectodermal dysplasia, familial dysautonomia
	Erythema nodosum	Infection, juvenile idiopathic arthritis, systemic lupus erythematosus, malignancy, inflammatory bowel disease
	Erythema migrans	Lyme disease, southern tick-associated rash illness (STARI)
	Eschar	Tularemia
	Macular salmon-pink rash	Juvenile idiopathic arthritis
	Malar erythema	Systemic lupus erythematosus
	Palpable purpuric lesions	Polyarteritis nodosa
	Petechiae	Endocarditis, bacteremia, viral infection, rickettsia
	Seborrheic rash	Histiocytosis
	Urticarial macular rash	Serum sickness, familial cold autoinflammatory syndrome, Muckle-Wells syndrome, neonatal-onset multisystem inflammatory disease

NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ
Muayene Bulguları



Kawasaki Hastalığı

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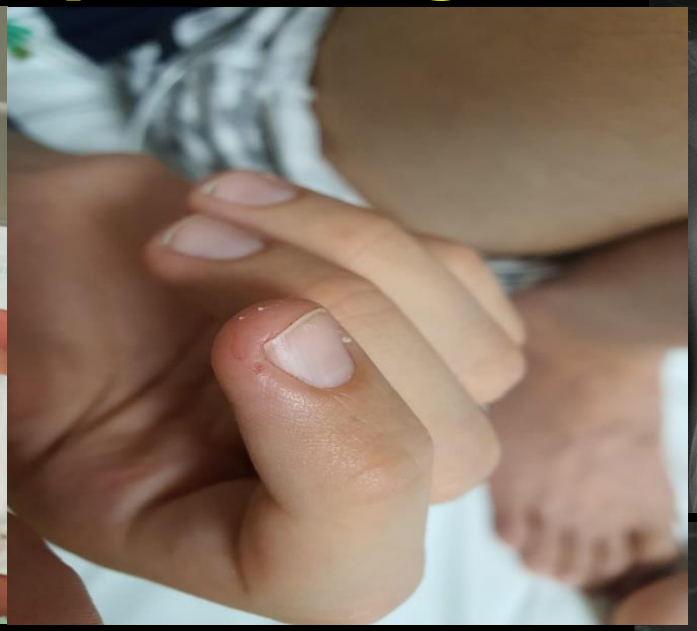
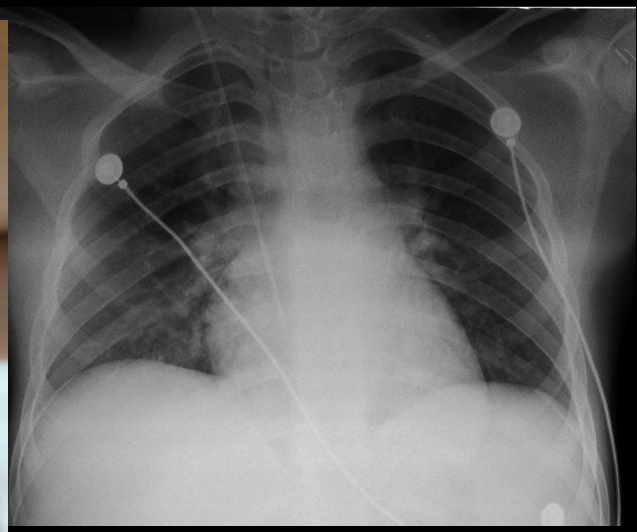
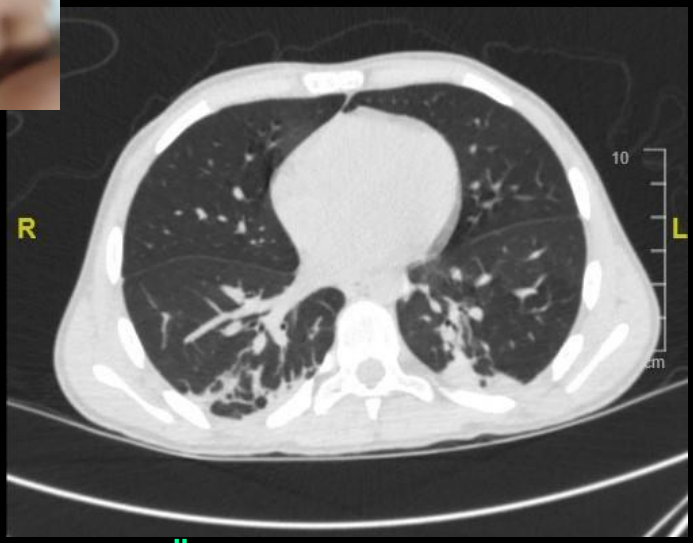
Çocuk Enfeksiyon Hastalıkları Arşivi

NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ
Muayene Bulguları







COVID-19 ilişkili MIS-C

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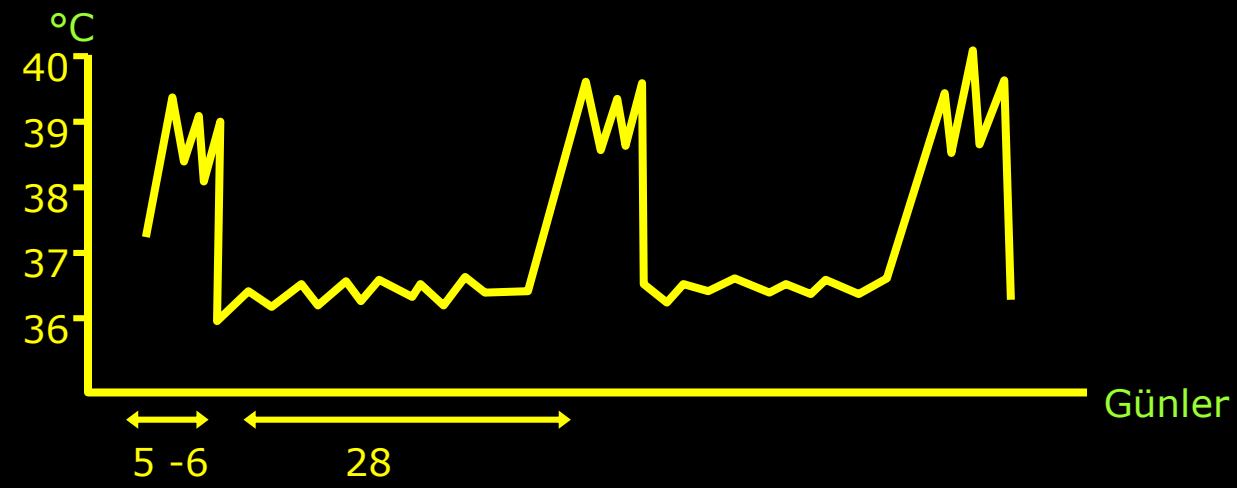
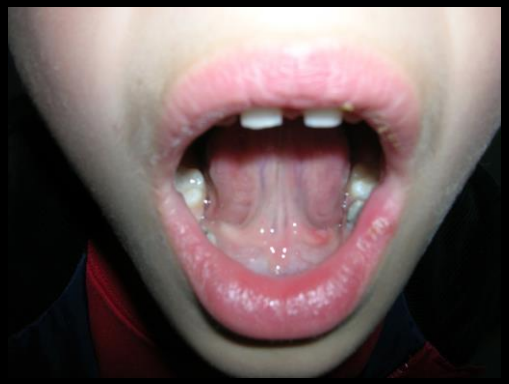
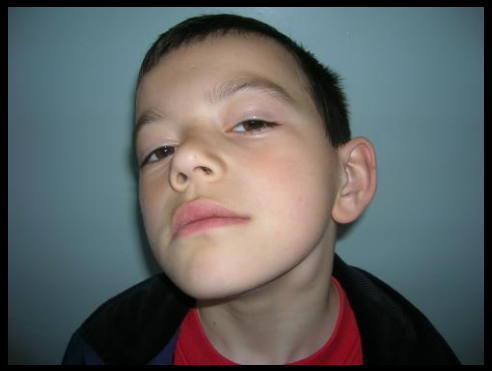
NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ
Muayene Bulguları

ATEŞ ÇİZELGESİ







PFAPA Sendromu

Türk Pediatri Arşivi 2004; 39: 36- 40

Periyodik ateş, aftöz stomatit, farenjit ve servikal adenit (PFAPA) sendromlu bir olgu

Ergin Çiftçi, Halil Özdemir, Sonay İncesoy, Erdal İnce, Ülker Doğru

Özet

Bu olgu sunumunda yineleyen ateş, boyunda şişlik, boğaz ağrısı ve ağızda yaralar çıkması yakınmalarıyla başvuran iki buçuk yaşında erkek hasta sunulmaktadır. Hastanın öyküsünden ataklarının 28 günde bir yinelediği ve 5-6 günde kendiliğinden düzeldiği öğrenildi. Atak sırasında akut faz reaktanlarının yükseldiği ve ataklar arasında tamamen normale döndüğü saptandı. Bu bulgularla hastada periyodik ateş, aftöz stomatit, farenjit ve servikal adenit (PFAPA) sendromu düşünüldü. Hastanın atakları tek doz prednizon ile dramatik biçimde düzeldi. İzlemde hastanın ataklarının kaybolduğu.

Anahtar kelimeler: aftöz stomatit, farenjit, lenfadenit, periyodik ateş, PFAPA sendromu

Summary

A patient with periodic fever, aphthous stomatitis, pharyngitis, and cervical adenitis (PFAPA) syndrome

In this case report, a 2.5-year-old boy with complaintsed of recurrent attacks of fever, sore throat, oral ulcers and swelling on the neck is presented. His history revealed that the attacks had recurred every 28 days and resolved within 5 to 6 days. His acute phase reactants were elevated during the attacks, and returned to normal at intervals. Periodic fever, aphthous stomatitis, pharyngitis and cervical adenitis (PFAPA) syndrome was suggested. The attacks of the patient dramatically resolved after a single dose of prednisone and completely disappeared during the follow-up.

Key words: aphthous stomatitis, lymphadenitis, periodic fever, PFAPA syndrome, pharyngitis

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NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ
Hayvan Teması

EXPOSURE	ZOONOSES
Birds	Psittacosis, cryptosporidiosis, histoplasmosis, West Nile virus
Cats	*Bartonella henselae*, tularemia, *Pasteurella multocida*, rabies, *Capnocytophaga, Salmonella, Campylobacter, Cryptosporidium, Giardia lamblia, Toxoplasma gondii, Toxocara cati, Echinococcus, Ancylostoma braziliense, Dipylidium caninum*, leptospirosis, *Sporothrix schenckii, Microsporum canis*
Cows, Sheep, Goats	*Escherichia coli, Campylobacter, Salmonella, Cryptosporidium, Coxiella*, tularemia, *Brucella*
Dogs	Rabies, *Brucella, Pasteurella multocida, Capnocytophaga, Salmonella, Campylobacter, Giardia lamblia, Toxocara canis, Ancylostoma caninum, Echinococcus, Dipylidium caninum*
Ferrets	*Salmonella, Campylobacter*, cryptosporidiosis, toxocariasis, tuberculosis, leptospirosis, listeriosis, influenza, *Giardia, Mycobacterium microti*, rabies
Water (Fish, Water Mammals, Oysters Clams)	*Mycobacterium marinum*, schistosomiasis, *Vibrio parahaemolyticus, V vulnificus, Brucella Legionella, Pseudomonas, Parachlamydia, Giardia, Mycobacterium leprae, M avium, M marinum, M ulcerans, M simiae, Burkholderiaceae, Coxiella burnetii, Francisella tularensis, Enterobacteriaceae, Vibrionaceae, Listeria monocytogenes, Helicobacter pylori, Cryptococcus neoformans*
Squirrels	*Toxoplasma gondii, Rickettsia prowazekii*
Horses	*Salmonella, Campylobacter, Cryptosporidium, Giardia lamblia, Clostridium difficile, Brucella, Rhodococcus equi, Coxiella burnetii*
Insect Bites (Mosquitoes, Ticks, Fleas)	Malaria, *Trypanosoma cruzi*, equine encephalitis, West Nile virus, Lyme disease, ehrlichiosis, babesiosis, *Yersinia pestis*, tularemia, *Dirofilaria immitis*, leishmania, coltiviruses (Colorado tick fever), Lyme disease, Rocky Mountain spotted fever, ehrlichiosis, babesiosis, Toscana virus
Rabbits	*Salmonella*, tularemia, *Yersinia, Cryptosporidium, Trichophyton, Pasteurella multocida*, rabies, babesiosis
Reptiles	*Salmonella, Edwardsiella tarda, Plesiomonas*, pentastomiasis
Rodents	Tularemia, leptospirosis, rat bite fever (*Streptobacillus moniliformis* and *Spirillum minus*), rabies, *Salmonella*, lymphocytic choriomeningitis virus, *Trichophyton*, hantavirus, *Pasteurella*

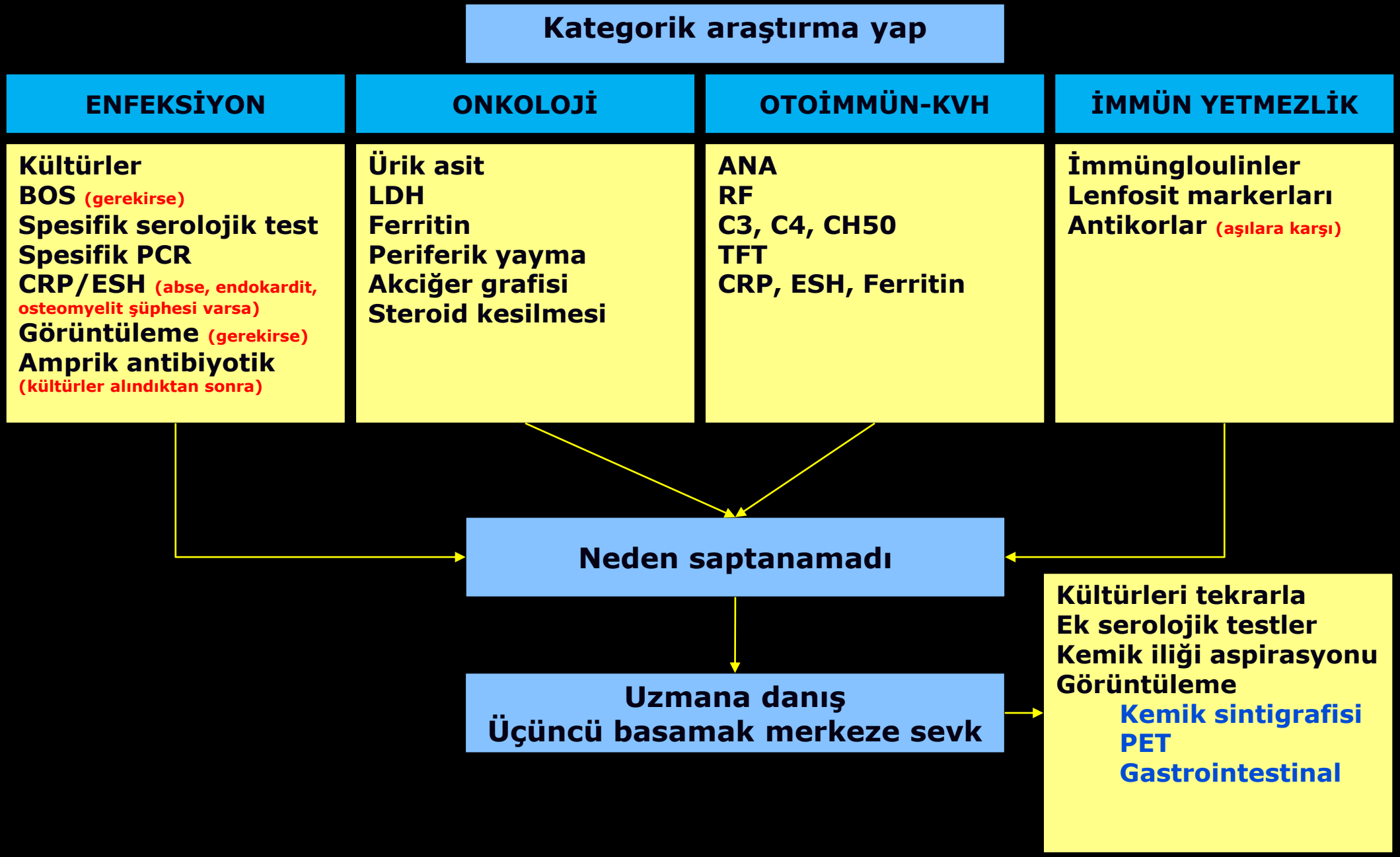
NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ
İlaçlar

CLASS	DRUGS
Antimicrobial agents	Acyclovir, carbapenems, cephalosporins, tetracyclines, mebendazole, nitrofurantoin, penicillins, rifampin, sulfonamides, vancomycin
Anticonvulsants	Barbiturates, carbamazepine, phenytoin
Antidepressants	Doxepin, nomifensine
Antineoplastic agents	6-mercaptupurine, bleomycin, chlorambucil, cisplatin, cytosine arabinoside, daunorubicin, hydroxyurea, interferon, L-asparaginase, procarbazine, streptozocin, vincristine
Cardiovascular drugs	Clofibrate, diltiazem, dobutamine, furosemide, heparin, hydralazine, hydrochlorothiazide, methyldopa, oxprenolol, procainamide, quinidine, triamterene
Histamine-2 blockers	Cimetidine, ranitidine
Immunosuppressants	Azathioprine, everolimus, mycophenolate mofetil, sirolimus
Nonsteroidal anti-inflammatory drugs	Ibuprofen, sulindac, phenothiazines, salicylates
Other	Allopurinol, antihistamines, folate, herbal remedies, iodide, metoclopramide, piperazine, propylthiouracil, prostaglandin E2, ritodrine, sulfasalazine, sympathomimetics, theophylline, thyroxine

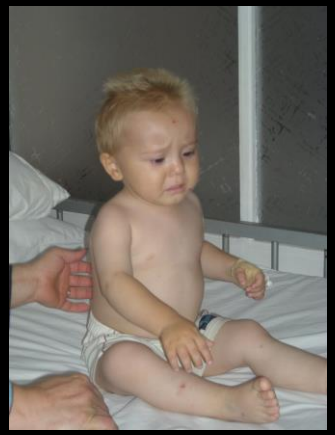
NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ
Seroloji

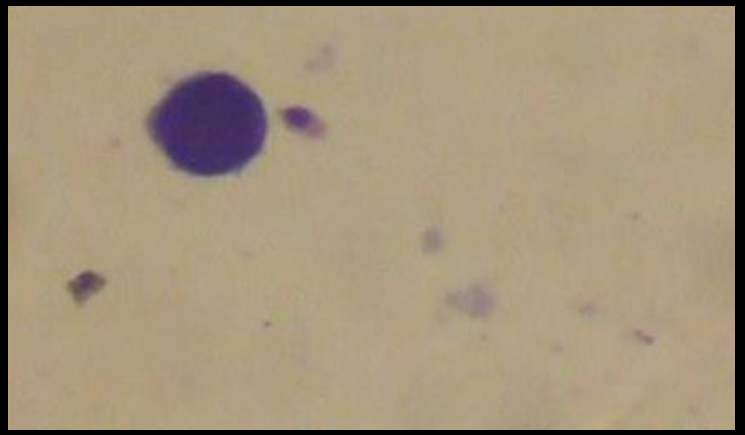
- Epstein-Barr virüs enfeksiyonu
- Sitomegalovirüs enfeksiyonu
- Toksoplazmoz
- Salmonelloz
- Tularemi
- Bruselloz
- Leptospiroz
- Kedi tırmığı hastalığı
- Lyme hastalığı
- Riketsiya hastalıkları
- Juvenil idiopatik artrit

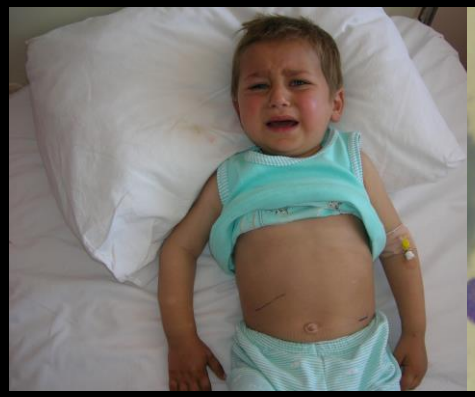

Ateş ≥ 8 Gün
Hasta iyi görünüyor
Evet
Hayır
İLK ETAP
HASTANEYE YATIR
Gereksiz tedavileri kes
Kan sayımı ve formül
BFT, elektrolitler, glukoz
Transaminazlar
İdrar incelemesi
Gerekiyorsa görüntüleme yap
Gözlem ve muayeneye devam et
Gereksiz tedavileri kes
Kan sayımı ve formül
BFT, elektrolitler, glukoz
Transaminazlar
İdrar incelemesi
Gerekiyorsa görüntüleme yap
Gerekiyorsa BOS
CRP bakmayı düşün
Kültürler
Ampirik antibiyotik (kültür sonrası)
Gözlem ve muayeneye devam et
Ateş düştü
Neden saptandı
Evet
Hayır
Nedeni tedavi et
Kategorik araştırma yap

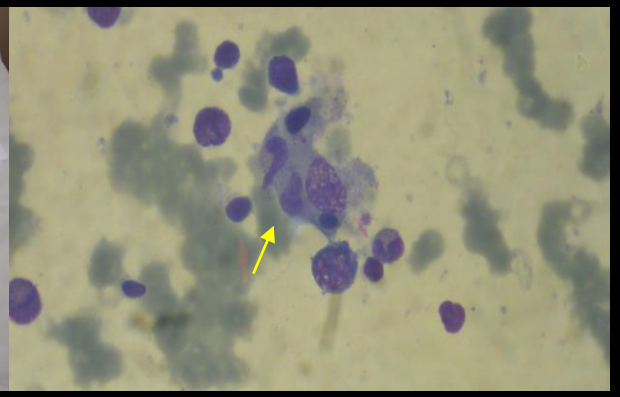

Kategorik araştırma yap
ENFEKSİYON
ONKOLOJİ
OTOİMMÜN-KVH
İMMÜN YETMEZLİK
Kültürler
BOS (gerekirse)
Spesifik serolojik test
Spesifik PCR
CRP/ESH (abse, endokardit, osteomyelit şüphesi varsa)
Görüntüleme (gerekirse)
Amprik antibiyotik
(kültürler alındıktan sonra)
Ürik asit
LDH
Ferritin
Periferik yayma
Akciğer grafisi
Steroid kesilmesi
ANA
RF
C3, C4, CH50
TFT
CRP, ESH, Ferritin
İmmüngloulinler
Lenfosit markerları
Antikorlar (aşılara karşı)
Neden saptanamadı
Uzmana danış
Üçüncü basamak merkeze sevk
Kültürleri tekrarla
Ek serolojik testler
Kemik iliği aspirasyonu
Görüntüleme
Kemik sintigrafisi
PET
Gastrointestinal

NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ
Biyopsi









Case Report

Hemophagocytic Lymphohistiocytosis Associated with Visceral Leishmaniasis

by Anil Tapisiz, Nurşen Belet, Ergin Çıflçı, Erdal İnce, *and* Ülker Doğru
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Summary

Visceral leishmaniasis (VL), is a systemic disease caused by the dissemination of protozoan parasite *Leishmania* throughout the reticuloendothelial system. It may mimic or lead to several types of hematological disorders including hemophagocytosis. Infection associated hemophagocytic syndrome implicating *Leishmania* is very rare and often difficult to diagnose. Here, we describe a child with hemophagocytic lymphohistiocytosis (HLH) associated with VL.

Key words: *Leishmania*, hemophagocytosis, children

Kala Azar

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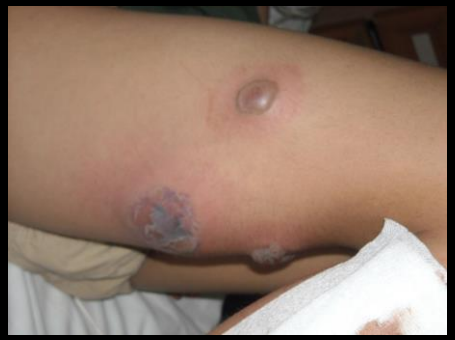
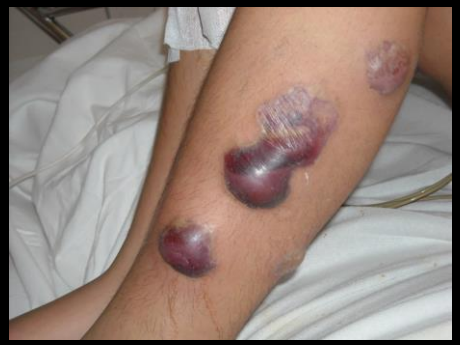
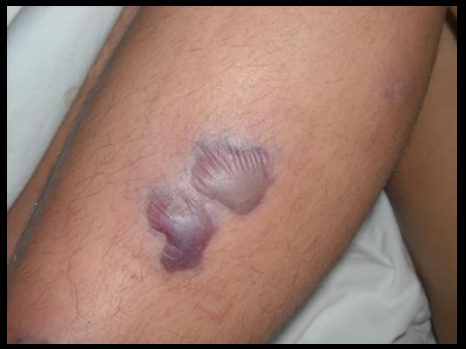
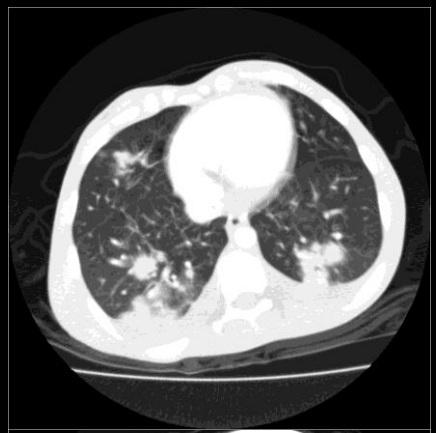
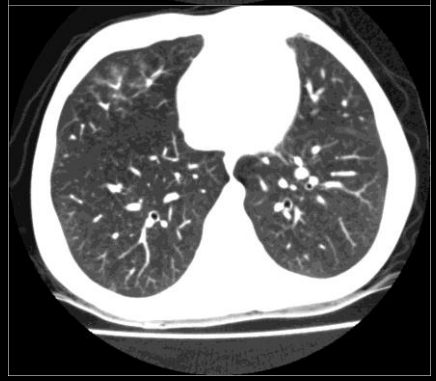
NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ
Biyopsi

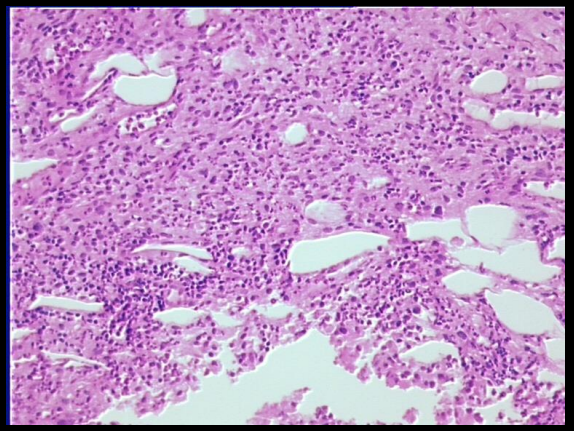












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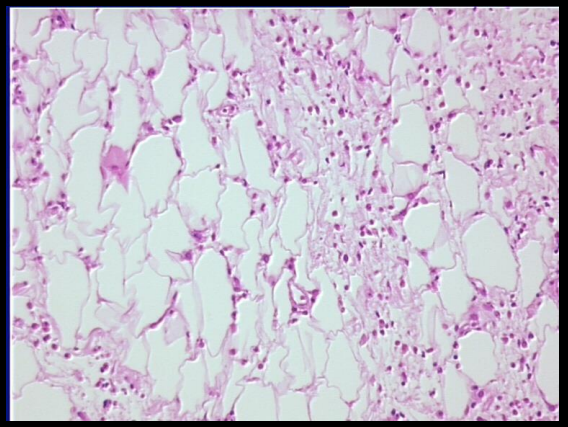

Sweet Sendromu

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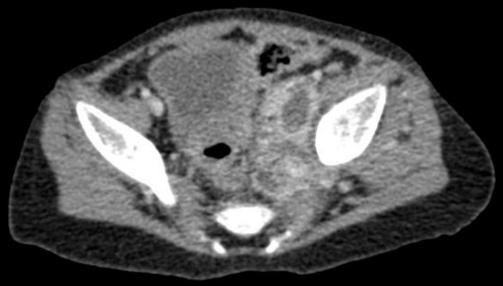
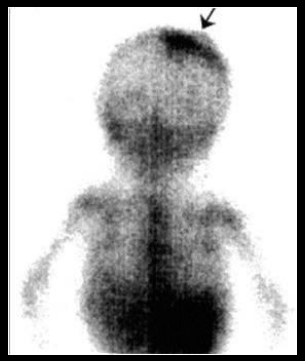
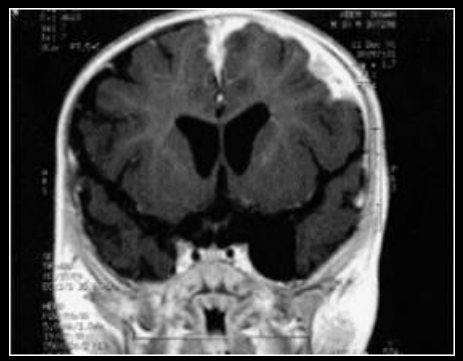
NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ
Görüntüleme

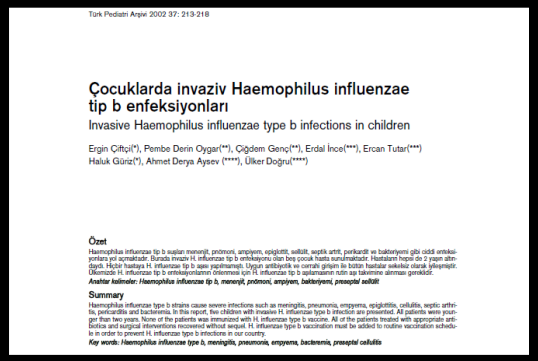
Osteomyelit-İliopsoas Absesi
Staphylococcus aureus



Pürülan menenjit-Epidural abse
***Haemophlus influenzae* tip b**







Türk Pediatri Arşivi 2002 37: 213-218

Çocuklarda invaziv Haemophilus influenzae tip b enfeksiyonları

Invasive Haemophilus influenzae type b infections in children

Ergin Çiftçi(*), Pembe Derin Oygar(**), Çiğdem Genç(**), Erdal İnce(***), Ercan Tutar(***) Haluk Gürüz(*), Ahmet Derya Aysev (****), Ülker Doğru(****)

Özet

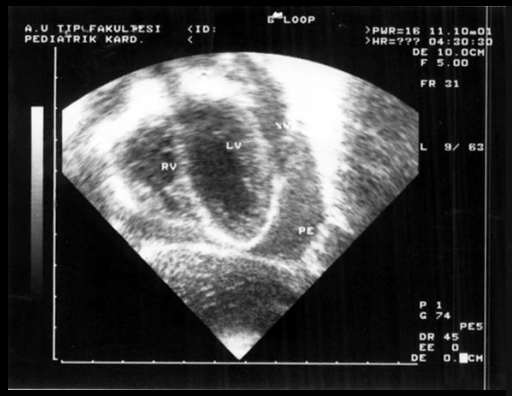
Haemophilus influenzae tip b suşları menenjit, pnömoni, ampiyem, epiglottit, selülit, septik artrit, perikardit ve bakteriyemi gibi ciddi enfeksiyonlara yol açmaktadır. Burada invaziv H. influenzae tip b enfeksiyonu olan beş çocuk hasta sunulmaktadır. Hastaların hepsi dö 2 yaşın altındaydı. Hiçbir hastaya H. influenzae tip b aşısı yapılmamıştı. Uygun antibiyotik ve cerrahi girişim ile bütün hastalar sekelsiz olarak iyileşmiştir. Ülkemizde H. influenzae tip b enfeksiyonlarının önlenmesi için H. influenzae tip b aşılamasının rutin aşı takvimine alınması gereklidir.

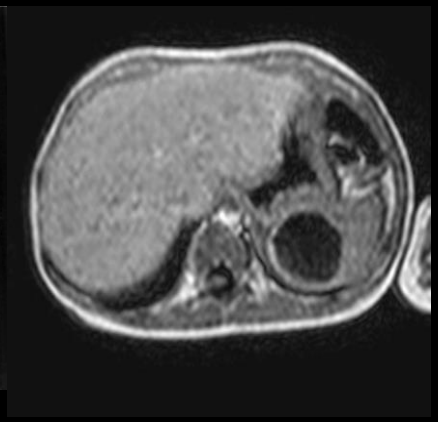
Anahtar kelimeler: Haemophilus influenzae tip b, menenjit, pnömoni, ampiyem, bakteriyemi, prespetal selülit

Summary

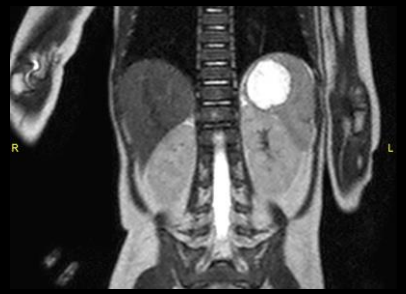
Haemophilus influenzae type b strains cause severe infections such as meningitis, pneumonia, empyema, epiglottitis, cellulitis, septic arthritis, pericarditis and bacteremia. In this report, five children with invasive H. influenzae type b infection are presented. All patients were younger than two years. None of the patients was immunized with H. influenzae type b vaccine. All of the patients treated with appropriate antibiotics and surgical interventions recovered without sequel. H. influenzae type b vaccination must be added to routine vaccination schedule in order to prevent H. influenzae type b infections in our country.

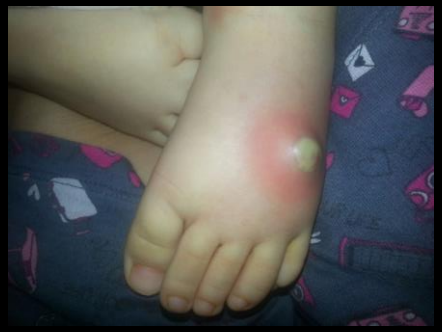
Key words: Haemophilus influenzae type b, meningitis, pneumonia, empyema, bacteremia, prespetal cellulitis





Pürülan Perikardit
***Haemophlus influenzae* tip b**





Dalak absesi
Kültürde üreme yok

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NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ
Tanıya Giden Yol

- Hastanın başvuru yakınmaları ve bulguları
- Eşlik eden semptomlar
- Coğrafi bölge
- Çevresel maruziyet
- Deneyimli bir hekim değerlendirmesi
- Mevcut test olanaklarının kullanılması

NEDENİ BİLİNMEYEN UZAMIŞ ATEŞ
Tanıya Giden Yol

Common Causes of Pediatric FUO

Infectious

Bacterial	*Viral*	*Other*
Abscess	Adenovirus	Blastomycosis
Bartonella	Arbovirus	Cryptosporidium
Brucellosis	Cytomegalovirus	Ehrlichiosis
Leptospirosis	Enterovirus	Histoplasmosis
Mastoiditis	Epstein-Barr Virus	Leishmaniasis
Mycoplasma	Hepatitis Viruses	Lymphogranuloma Venereum
Osteomyelitis	Herpes Simplex Virus	Malaria
Pyelonephritis	Human Immunodefiency Virus	Psittacosis
Rat Bite Fever	Picornavirus	Q Fever
Salmonellosis		Rocky Mountain Spotted Fever
Sinusitis		Toxoplasmosis
Tuberculosis		Visceral larva migrans
Tularemia		
Non-Tuberulous Mycobacteria		

Non-Infectious

Oncologic	*Autoimmune*	*Other*
Leukemia	Behcet Disease	Diabetes Insipidus
Lymphoma	Inflammatory Bowel Disease	Drug Fever
Langerhans Cell Histiocytosis	Hyperthyroidism	Factitious Fever
Neuroblastoma	Granulomatosis (with polyangitis)	Familial Dysautonomia
Hemophagocytic Lymphohistiocytosis	Juvenile Idiopathic Arthritis	Periodic Fever Syndromes
	Kawasaki Disease	Pancreatitis
	Polyarteritis Nodosa	Serum Sickness
	Sarcoidosis	Cyclic neutropenia
	Systemic Lupus Erythematous	Kikuchi-Fujimoto Disease
	Antiphospholipid Antibody Syndrome	
	Subacute thyroiditis	

FAHRENHEIT 451 (1966)