KAWASAKİ HASTALIĞI

Prof. Dr. Ergin ÇİFTÇİ

Ankara Üniversitesi Tıp Fakültesi
Çocuk Enfeksiyon Hastalıkları Bilim Dalı

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13 Ocak 2025

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TOMİSAKU KAWASAKİ

Gizemli Hastalığın İsim Babası

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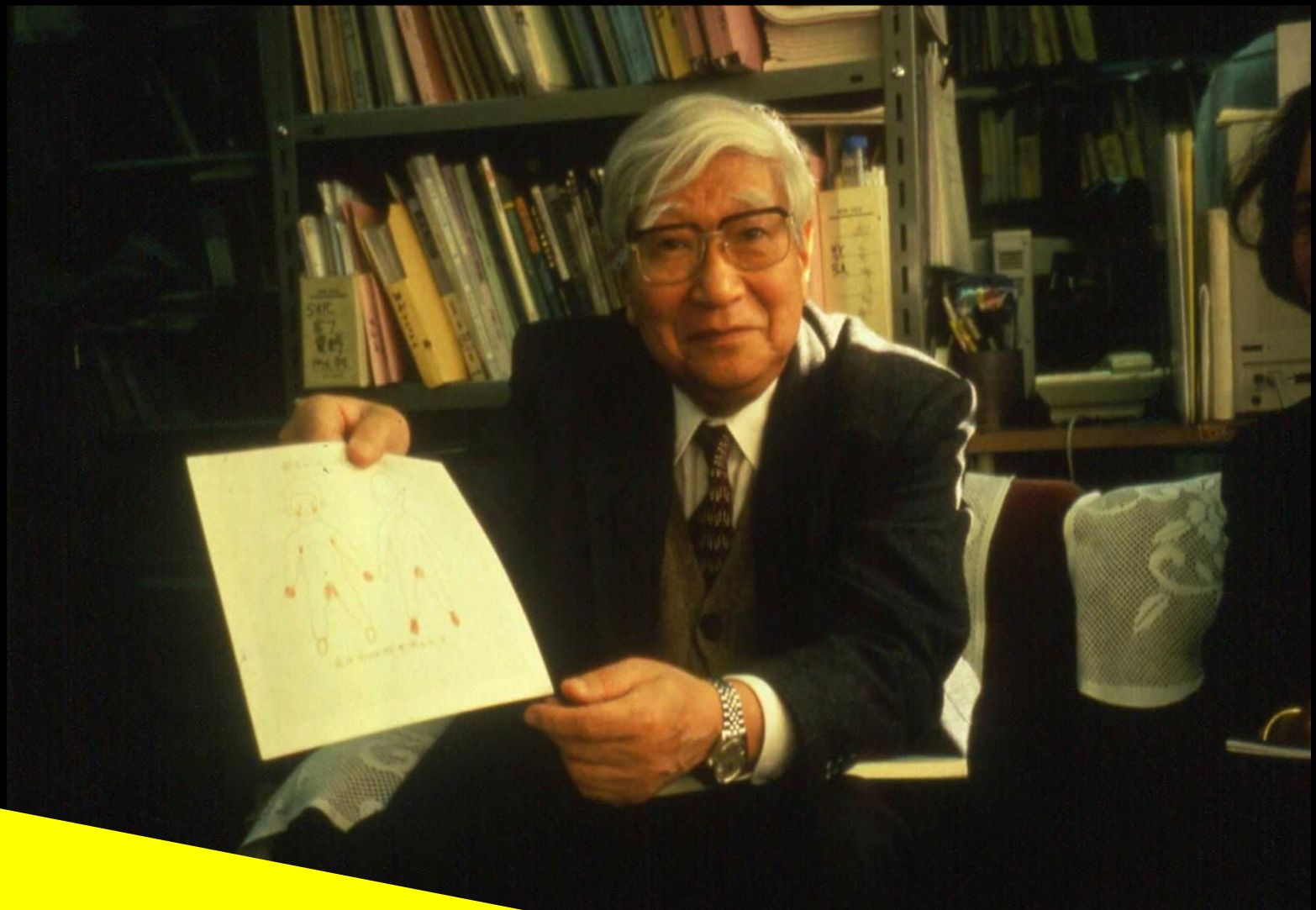

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Kısa Tarihçe

Pediatr Infect Dis J, 2002;21:993–5

Commentary: Translation of Dr. Tomisaku Kawasaki's original report of fifty patients in 1967

JANE C. BURNS, MD

The description in Japanese by Tomisaku Kawasaki of 50 infants and children suffering from a curious new ailment in Japan in the 1960s has now been translated into English and is available for readers at http://www.pidj.com. It is truly a masterpiece of descriptive clinical writing from the past century.[1] In his exhaustive detailing of every observable aspect of the disease, Kawasaki was part Sherlock Holmes and part Charles Dickens with his sense of mystery and his vivid descriptions of the clinical features of these patients. So careful are the daily observations of his patients that when one reads in the detailed description of the first case that the patient "smiled for the first time" on the 26th day of his illness, one is convinced that this is an accurate statement.

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Klinik Bulgular

Classic KD is diagnosed in the presence of fever for at least 5 d (the day of fever onset is taken to be the first day of fever) together with at least 4 of the 5 following principal clinical features. In the presence of ≥4 principal clinical features, particularly when redness and swelling of the hands and feet are present, the diagnosis of KD can be made with 4 d of fever, although experienced clinicians who have treated many patients with KD may establish the diagnosis with 3 d of fever in rare cases (Figure 2):

1. Erythema and cracking of lips, strawberry tongue, and/or erythema of oral and pharyngeal mucosa
2. Bilateral bulbar conjunctival injection without exudate
3. Rash: maculopapular, diffuse erythroderma, or erythema multiforme-like
4. Erythema and edema of the hands and feet in acute phase and/or periungual desquamation in subacute phase
5. Cervical lymphadenopathy (≥1.5 cm diameter), usually unilateral

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Klinik Bulgular

ATEŞ

Klasik Kawasaki tanısı en az 5 gün ateşe dayanır.
Tipik bulgular varsa 4 veya 3 gün süren ateş ile tanı konulabilir.
Ateş remittan tiptedir (>39-40°C)
Uygun tedavi verilmezse 1-3 hafta boyunca sürer.
Kendiliğinden 7 günde düşen ateş tanıyı dışlamaz.
Ateş genellikle IVIG infüzyonunu takiben 36 saat içinde düşer.

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Klinik Bulgular

Incomplete Kawasaki disease in an infant presenting with only prolonged fever

Halil Özdemir[1], Aylin Çiftçi[2], Adem Karbuz[1], Ergin Çiftçi[1], Ercan Tutar[3], Semra Atalay[3], Erdal İnce[1]

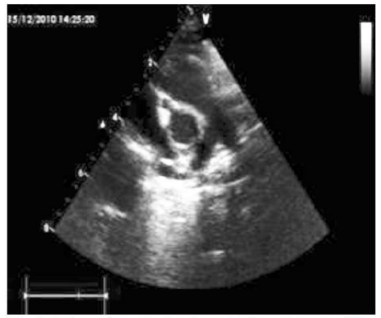

Fig. 1. Echocardiogram showing saccular aneurysm of the right coronary artery (3.5 mm in width).

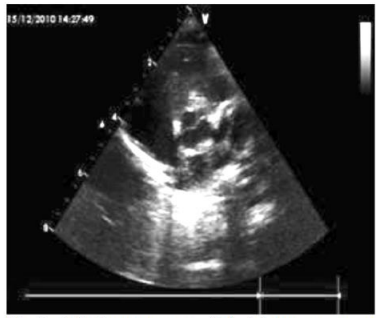

Fig. 2. A fusiform aneurysm of the left coronary artery (4.5 mm in width and 8 mm in length).

A 2.5-month-old boy admitted to our hospital with irritability, poor feeding and fever of 12 hours' duration. On physical examination, he was febrile and extremely irritable. Initial whole blood count revealed a hemoglobin level of 10.1 g/dl, white blood count of 17,800/mm^3 and platelet count of 454,000/mm^3. Erythrocyte sedimentation rate was 80 mm/h and C-reactive protein was 3.96 mg/dl. Biochemical examinations of serum, urinalysis, chest X-ray, and analysis of cerebrospinal fluid (CSF) were normal. He was started on intravenous ampicillin and ceftriaxone empirically for provisional occult bacteremia. His blood, urine and CSF cultures were negative. On the 7th day of the treatment, there were no additional symptoms or findings other than fever. Echocardiography revealed aneurysms in both the left and right coronary arteries. Intravenous immunoglobulin (IVIG) and per oral aspirin were administered, and the fever resolved after IVIG infusion. Two years later, the echocardiography showed disappearing of the saccular aneurysm on the right coronary artery, but the dilatation of the left coronary artery was persisting. In conclusion, incomplete Kawasaki disease should always be included in the differential diagnosis of an infant with persistent fever, especially one younger than three months of age, when the conventional [illegible] fails to reveal the underlying cause.

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KAWASAKI DISEASE WITHOUT FEVER

Claas H. Hinze, MD, Thomas B. Graham, MD,* and Jamie S. Sutherell, MD†*

Abstract: Kawasaki disease (KD) characteristically presents with prolonged, remittent fever in addition to other clinical findings. We report the case of a 3-month-old boy who developed characteristic manifestations of KD and coronary aneurysms in the absence of fever. This case report underlines the difficulty to diagnose KD in young infants.

Kawasaki Disease Without Fever: A Mild Disease?

Gámez-González Luisa Berenise[1], Rivera-Rodriguez Leonardo[2], García-Pavón Susana[3], Rivas-Larrauri Francisco[4], Yamazaki-Nakashimada Marco[2-4]

Results: Although rare, KD can occasionally present without fever. A total of eleven cases of non-fever KD have been described. The majority of cases do not present major complications. Conclusion:

Classic KD is diagnosed in the presence of fever for at least 5 d (the day of fever onset is taken to be the first day of fever) together with at least 4 of the 5 following principal clinical features. In the presence of ≥4 principal clinical features, particularly when redness and swelling of the hands and feet are present, the diagnosis of KD can be made with 4 d of fever, although experienced clinicians who have treated many patients with KD may establish the diagnosis with 3 d of fever in rare cases (Figure 2):

1. Erythema and cracking of lips, strawberry tongue, and/or erythema of oral and pharyngeal mucosa
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DÖKÜNTÜ

Döküntü genellikle ilk 5 gün içinde ortaya çıkar.

- **En sık yaygın makülopapüler döküntü görülür**
- **Scarlatiniform eritroderma**
- **Eritema multiforme**
- **Nadiren ürtikeryal veya mikropüstüler döküntü görülebilir**
- **Büllöz, veziküler ve peteşial döküntü beklenmez**

Döküntü, öncelikle gövde ve ekstremitelerdedir.

Kasık bölgesinde daha belirgin olup daha erken soyulur.

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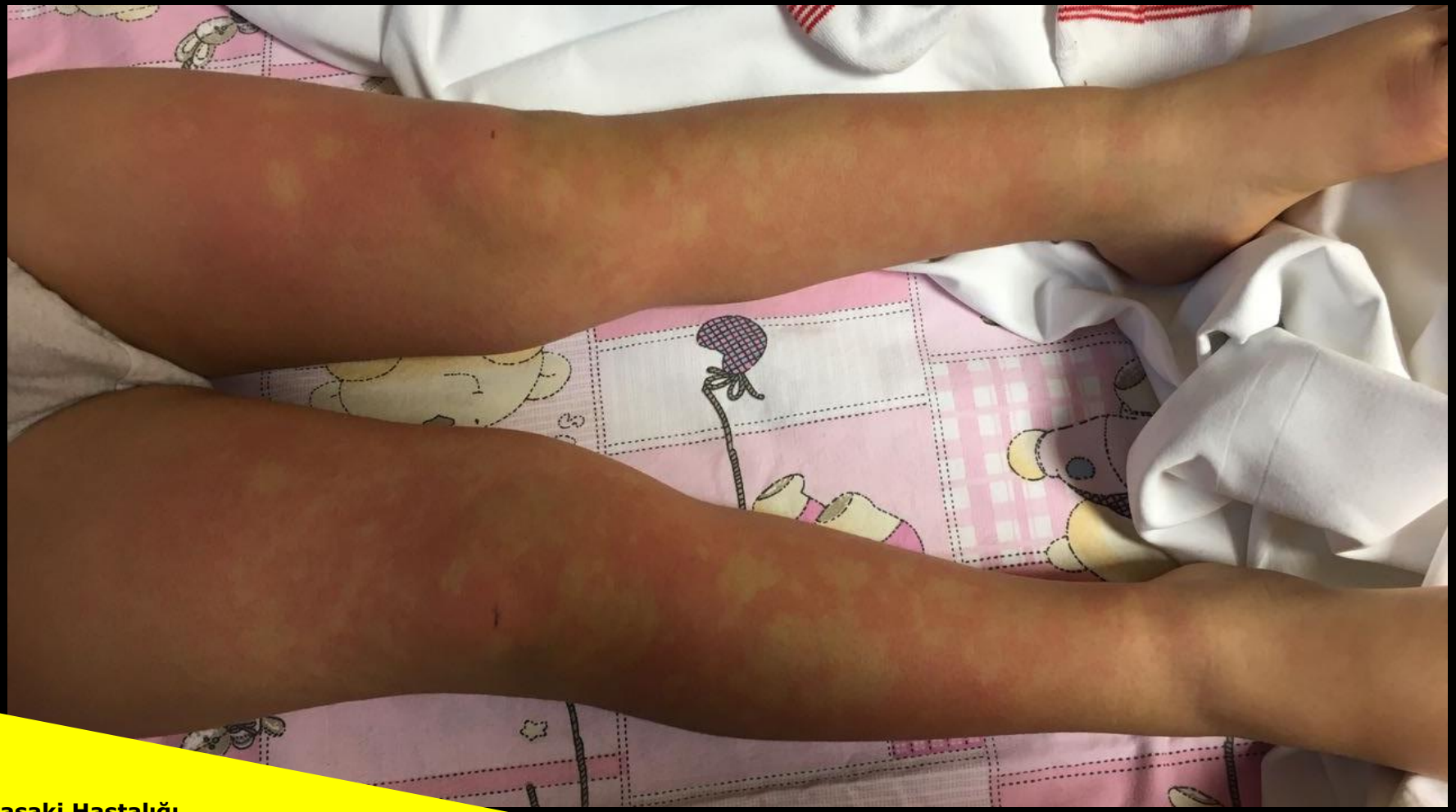

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Kawasaki Hastalığı

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EKSTREMİTE DEĞİŞİKLİKLERİ

Ekstremitelerdeki değişiklikler en belirgin bulgulardandır.

Avuç içi ve ayak tabanları kızarık, el ve ayakta bazen ağrılı olan endurasyon görülür.

Ateş başlangıcından sonra 2-3 hafta içinde el ve ayak parmaklarından başlayan soyulma görülür.

Ateş başlangıcından 1-2 ay sonra, tırnaklarda derin transvers oluklar (Beau çizgileri) görülebilir.

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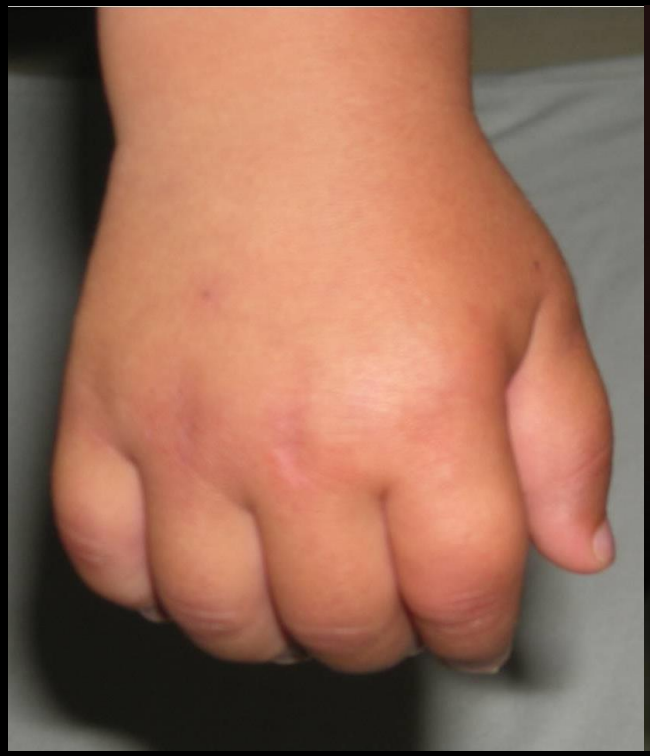

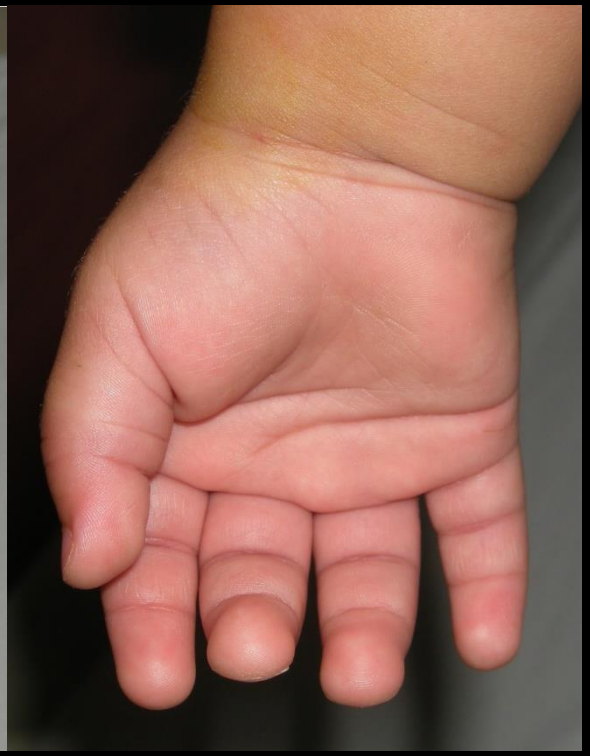

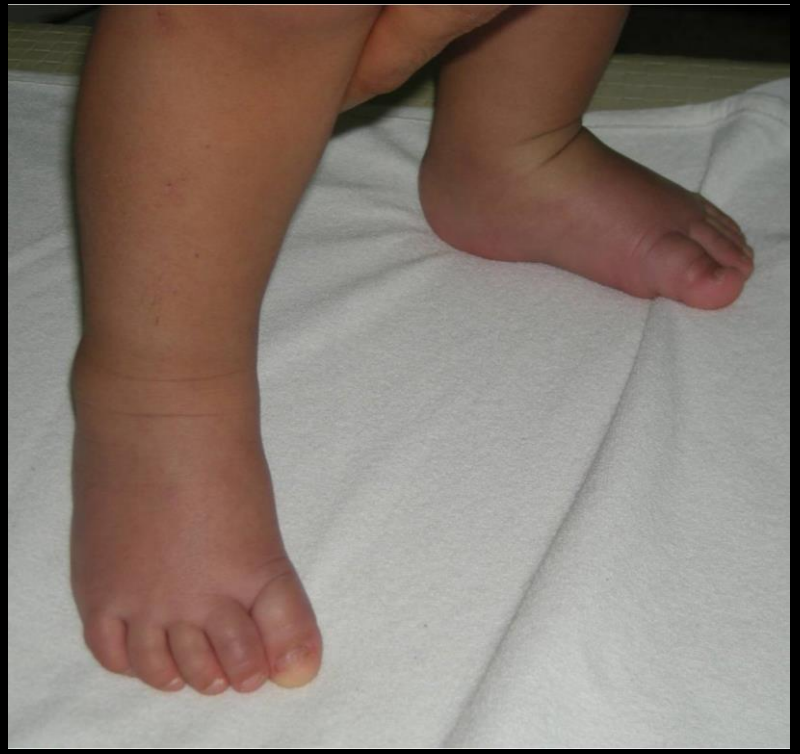

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KONJONKTİVAL KIZARIKLIK
Ateş başladıktan kısa bir süre sonra başlar.
Bilateral bulbar eksudatif olmayan konjonktival kızarıklık görülür.
Sıklıkla iris çevresindeki avasküler limbus bölgesini tutmaz.
Ön üveit (yarık lamba muayenesinde) ateşin ilk haftasında sıktır.
Subkonjonktival kanama ve punktat keratit bazen görülür.

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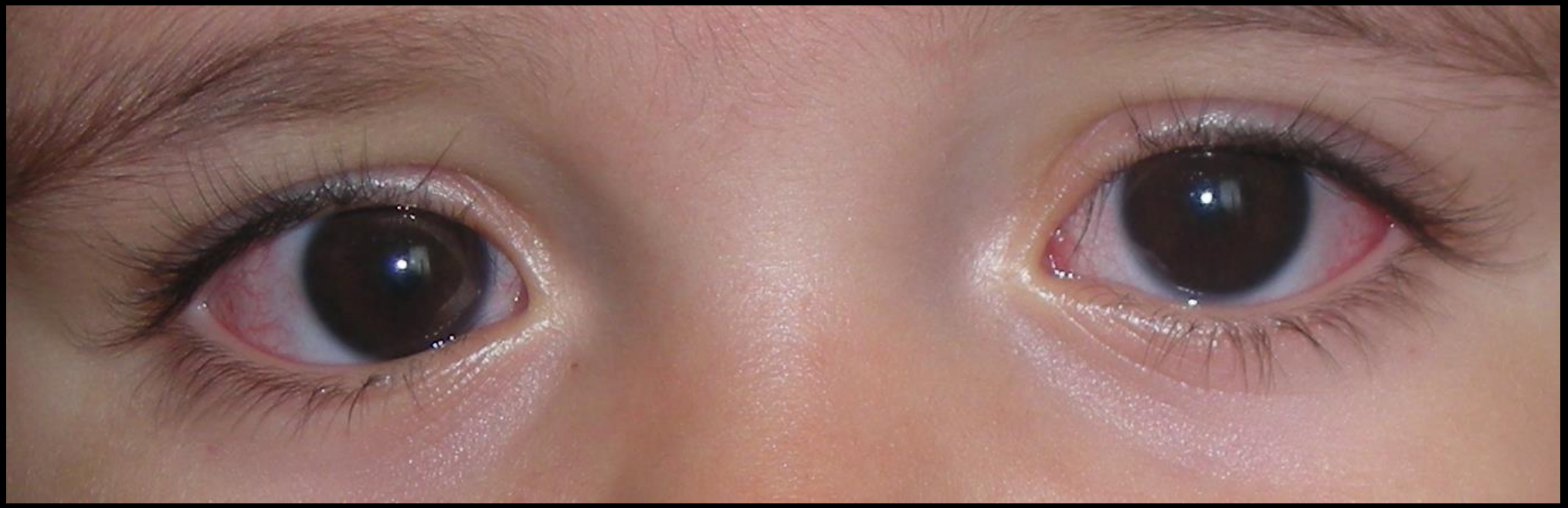

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AĞIZ DEĞİŞİKLİKLERİ

(1) Dudaklarda eritem, kuruluk, çatlama, soyulma ve kanama
(2) Çilek dili: dilde kızarıklık ve fungiform papillar belirgin
(3) Orofaringeal mukozada yaygın kızarıklık

Oral ülserler ve faringeal eksüdalar beklenmez.

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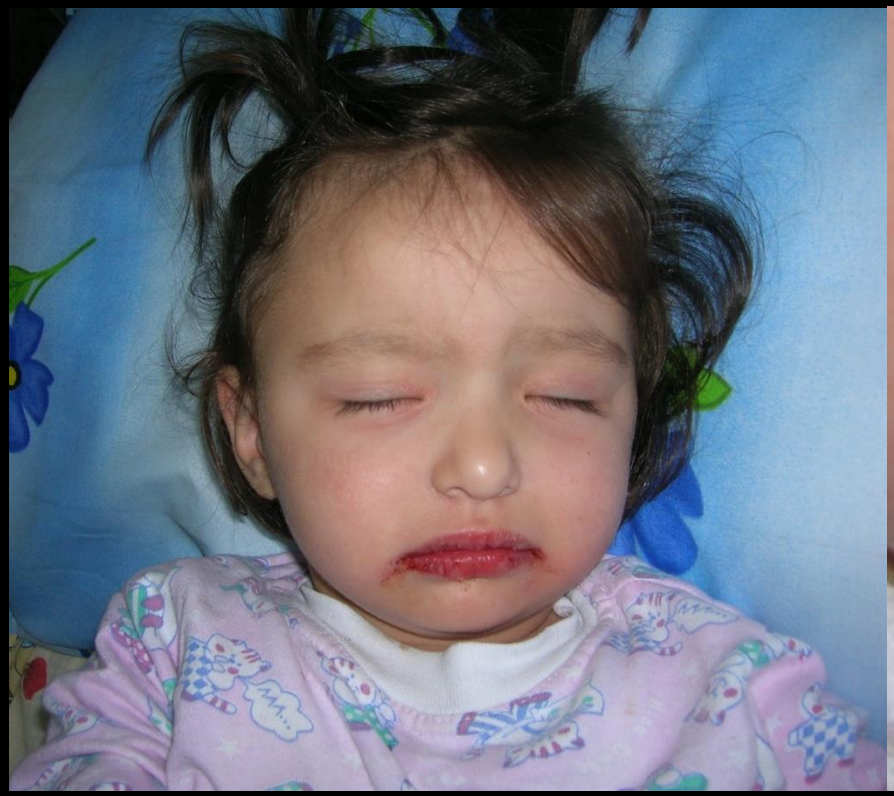

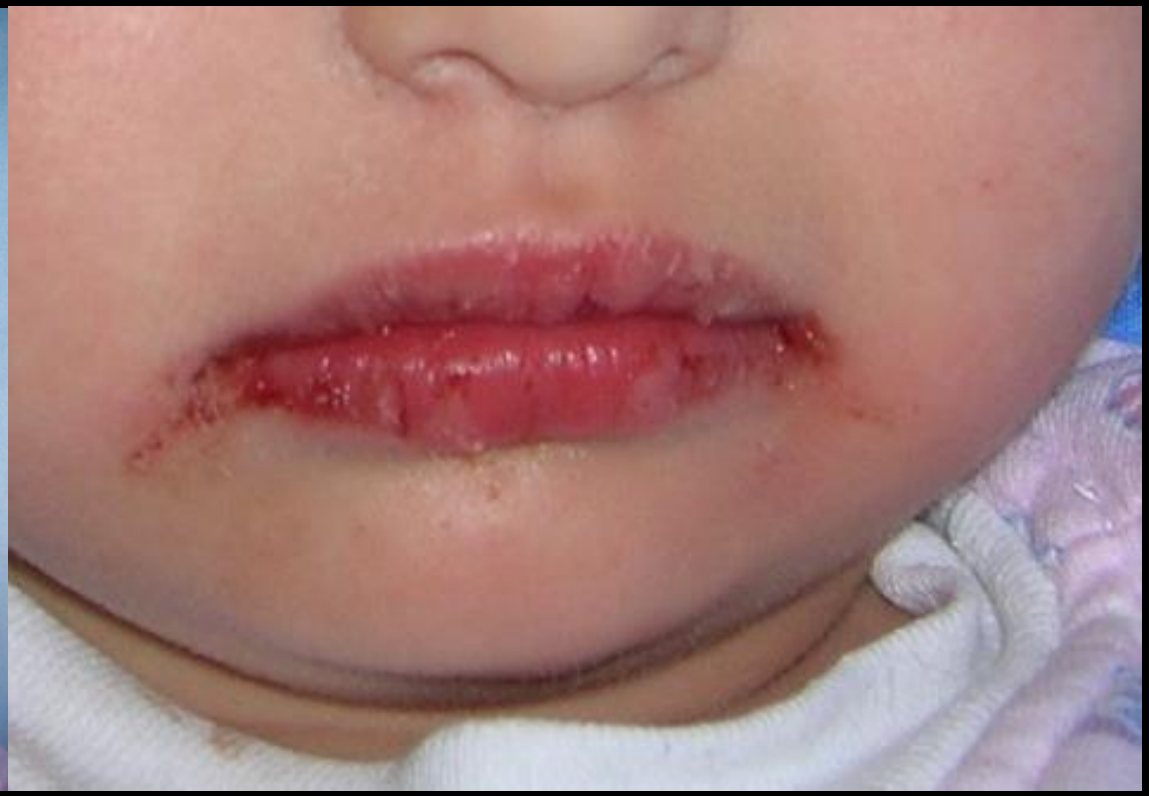

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SERVİKAL LENFADENOPATİ

Servikal lenfadenopati en az görülen tanı kriteridir.

Genellikle tek taraflı ≥1.5 cm çapında, ön servikal üçgen ile sınırlı.

Bazen lenf bezi bulguları en belirgin bulgu olabilir.

- **Bakteriyel lenfadenit düşündürür**
- **Antibiyotiğe rağmen ateş devam eder**
- **Döküntü ve konjonktival kızarıklık gibi diğer bulgular izler**
- **USG ve BT tanıda yardımcı olabilir**

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Kawasaki Hastalığı

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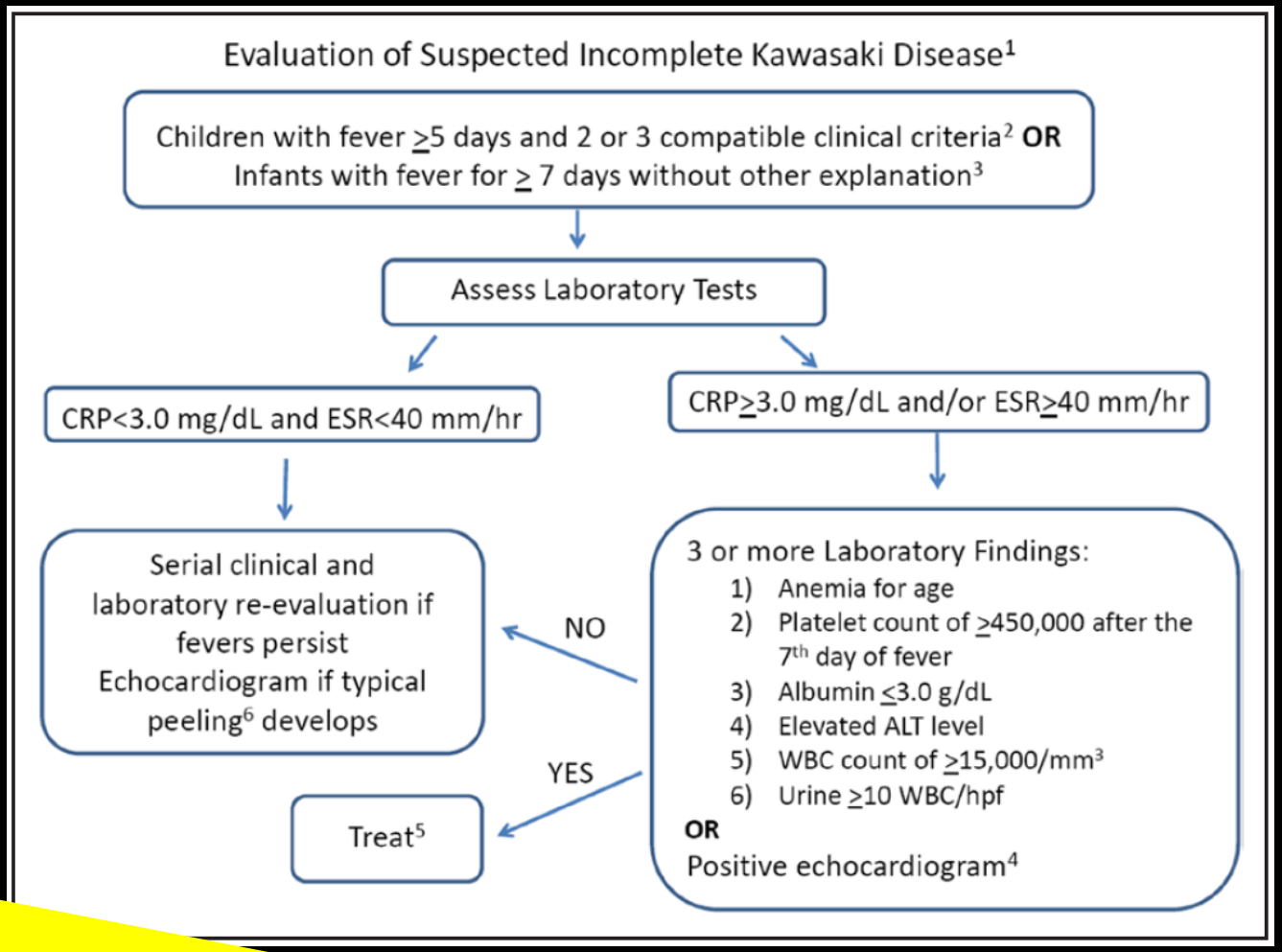

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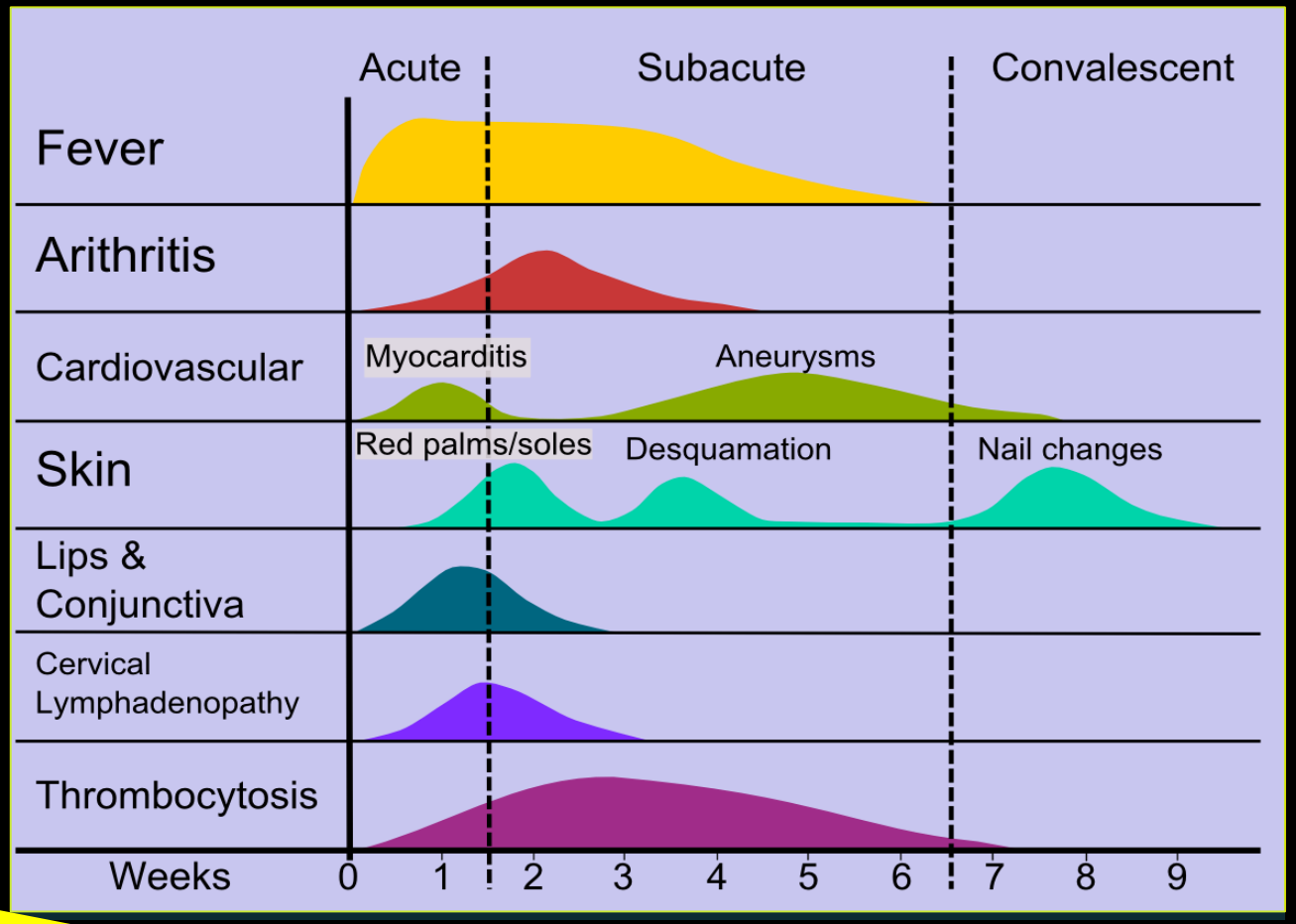

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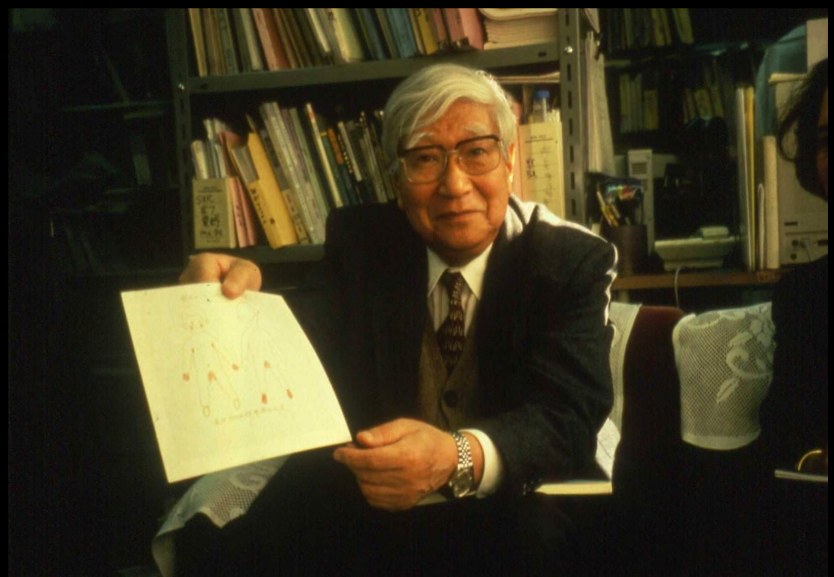

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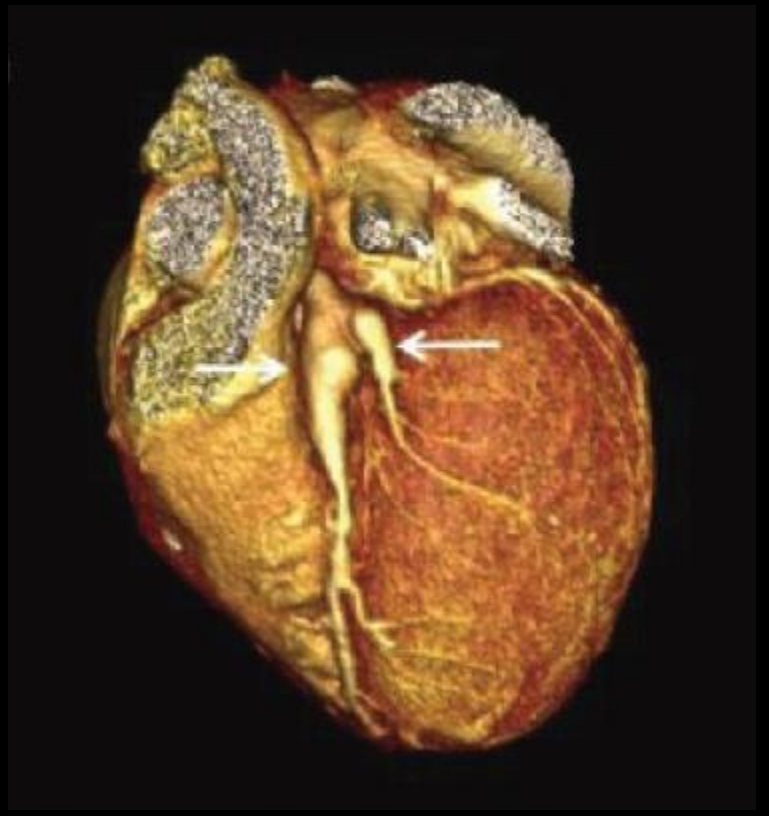
Kawasaki Sendromuna Bağlı Dev Koroner Anevrizma

Ömer Çiftçi[1], Cem Karadeniz[1], Bilge Aldemir Kocabaş[2], Adem Karbuz[2], Tayfun Uçar[1], Erdal İnce[2], Ercan Tutar[1], Ergin Çiftçi[2], Semra Atalay[1]

ONSEKİZ YILLIK KAWASAKİ HASTALIĞI DENEYİMİMİZ: NADİR SEMPTOM VE BULGULARLA HASTALIĞIN DİĞER YÜZÜ

Bilge Aldemir Kocabaş[1], Adem Karbuz[1], Cem Karadeniz[2], Ömer Çiftçi[2], Halil Özdemir[1], Gökalp Musa Bolkent[3], Tayfun Uçar[2], Ercan Tutar[2], Semra Atalay[2], Suat Fitöz[4], Ergin Çiftçi[1], Erdal İnce[1]



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Klinik Bulgular

Nervous system
Extreme irritability
Aseptic meningitis (pleocytosis of cerebrospinal fluid)
Facial nerve palsy
Sensorineural hearing loss
Genitourinary
Urethritis/meatitis, hydrocele
Other
Desquamating rash in groin
Retropharyngeal phlegmon
Anterior uveitis by slit lamp examination
Erythema and induration at BCG inoculation site

Other clinical findings may include the following:
Cardiovascular
Myocarditis, pericarditis, valvular regurgitation, shock
Coronary artery abnormalities
Aneurysms of medium-sized noncoronary arteries
Peripheral gangrene
Aortic root enlargement
Respiratory
Peribronchial and interstitial infiltrates on CXR
Pulmonary nodules
Musculoskeletal
Arthritis, arthralgia (pleocytosis of synovial fluid)
Gastrointestinal
Diarrhea, vomiting, abdominal pain
Hepatitis, jaundice
Gallbladder hydrops
Pancreatitis

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Laboratuvar Bulguları

Lökositoz
Nötrofil hakimiyeti
C-reaktif protein artışı
Eritrosit sedimantasyon hızı yüksekliği
Hemoglobin düşüklüğü
Sodyum düşüklüğü
Albümin düşüklüğü
Karaciğer enzimlerinde yükselme
Bilirübin yüksekliği

Steril piyüri
Trombositoz **Ateş başlangıcından sonraki ikinci haftada**

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Ayırıcı Tanı

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Ayırıcı Tanı

Solunum sinsityal virüsü
Metapneumovirüs
Coronavirüs
İnfluenza virüs
Parainfluenza virüs
...
Klinik bulguları klasik Kawasaki hastalığı ile uyumlu olan bir çocukta tanıyı dışlamaz.

Adenovirüs

Letter to the Editor

Isolated abducens palsy in adolescent girl with Kawasaki disease

Baris Guven,[1] Vedide Tavli,[1] Timur Mese,[1] Murat Muhtar Yilmazer[1] and Mahfuz Aydogan[2]
[1]*Divisions of Pediatric Cardiology and* [2]*Pediatrics, Dr Behçet Uz Children's Hospital, Izmir, Turkey*

Abducens nerve palsy in a girl with incomplete Kawasaki disease

Melike Emiroglu[1] · Gulsum Alkan[1] · Ayse Kartal[2] · Derya Cimen[3]

VI nerve palsy after intravenous immunoglobulin in Kawasaki disease

To the Editor,

Abducens nerve palsy: a rare copresenting sign of incomplete Kawasaki Disease

Jennifer M. Lai, BS,[a] Dallin C. Milner, MD,[b,c]
MD,[b,c]
MD[b,c]

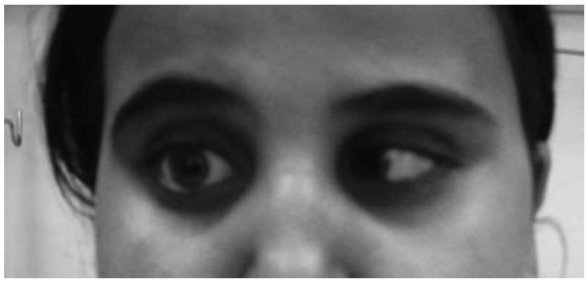

Fig. 1 Loss of abduction of the right eye is seen, demonstrating isolated sixth-nerve palsy.

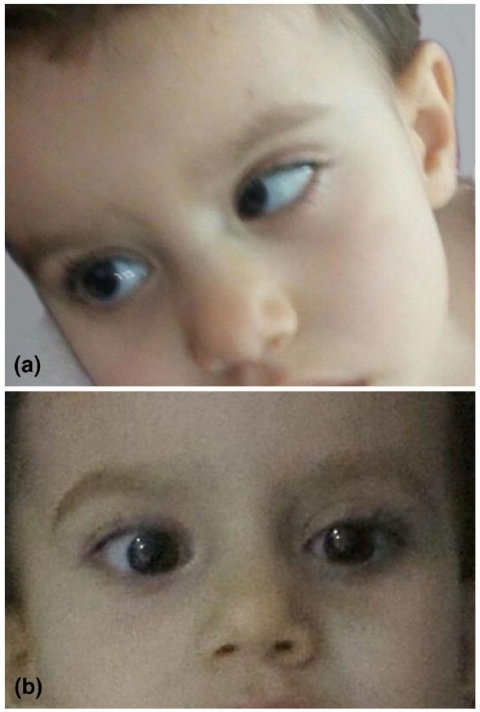

Fig. 1 Right abducens nerve palsy

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Tedavi

IVIG

2 g/kg, 10-12 saat infüzyon

Asetil salisilik asit

80-10 mg/kg/gün
30-50 mg/kg/gün
Ateş 48-72 saat düşene kadar veya 14 gün

3-5 mg/kg/gün, 6-8 hafta

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IVIG Dirençli Vakalarda Tedavi

Agent	Description	Dose
Most frequently administered		
IVIG: Second infusion	Pooled polyclonal IG	2 g/kg IV
IVIG + prednisolone	IVIG + steroid	IVIG: 2 g/kg IV + prednisolone 2 mg·kg^{-1}·d^{-1} IV divided every 8 h until afebrile, then prednisone orally until CRP normalized, then taper over 2–3 wk
Infliximab	Monoclonal antibody against TNF-α	Single infusion: 5 mg/kg IV given over 2 h
Alternative treatments		
Cyclosporine	Inhibitor of calcineurin-NFAT pathway	IV: 3 mg·kg^{-1}·d^{-1} divided every 12 h PO: 4–8 mg·kg^{-1}·d^{-1} divided every 12 h Adjust dose to achieve trough 50–150 ng/mL; 2-h peak level 300–600 ng/mL
Anakinra	Recombinant IL-1β receptor antagonist	2–6 mg·kg^{-1}·d^{-1} given by subcutaneous injection
Cyclophosphamide	Alkylating agent blocks DNA replication	2 mg·kg^{-1}·d^{-1} IV
Plasma exchange	Replaces plasma with albumin	Not applicable

IVIG resistance is defined as persistent or recrudescent fever at least 36 hours and <7 days after completion of first IVIG infusion.

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Tomisaku Kawasaki

It was in January 1961 that I encountered a child patient, aged 4 years and 3 months, who was to become the first known case of Kawasaki disease. Fifty years have elapsed since then. At the time, I had no choice but to discharge the patient as "diagnosis unknown." Fortunately, the child suffered no sequelae, and is currently enjoying a full and active life as an adult. Since then the incidence of Kawasaki disease has continued to grow. Why? Why can't we stop this disease? The reason, unfortunately, is that its cause is not known. At the time I first described the disease, I felt that we were on the threshold of discovering its cause, since its symptoms were extremely clear-cut. Despite the efforts of numerous researchers, however, we are still searching. It is my strong hope that young researchers will be able to identify the root cause of this disease.

Tomisaku Kawasaki

KAWASAKİ HASTALIĞI
Tomisaku Kawasaki

In the 2012 interview, Dr. Kawasaki speculated on why distinct cases of the new disease began to emerge in the 1960s. “Probably the use of measles vaccine made it easier to recognize cases of this new entity,” he said, “because measles cases became less common in the population.”

Dr. Tomisaku Kawasaki, Who Pinpointed a Mysterious Disease, Dies at 95

In 1967, he identified a disease that causes heart inflammation in children, one that Covid-19 has brought back into the news.

Dr. Tomisaku Kawasaki in an undated photo. He identified a multisymptom inflammatory syndrome among children that some researchers thought may have been linked to exposure to the new coronavirus.
Agence France-Presse — Getty Images

By Neil Genzlinger

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Dr. Tomisaku Kawasaki, who in 1967 first identified a disease in children that remains mysterious today and that has recently been in the news in relation to Covid-19, died on June 5 in Tokyo. He was 95.

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Kawasaki Hastalığı

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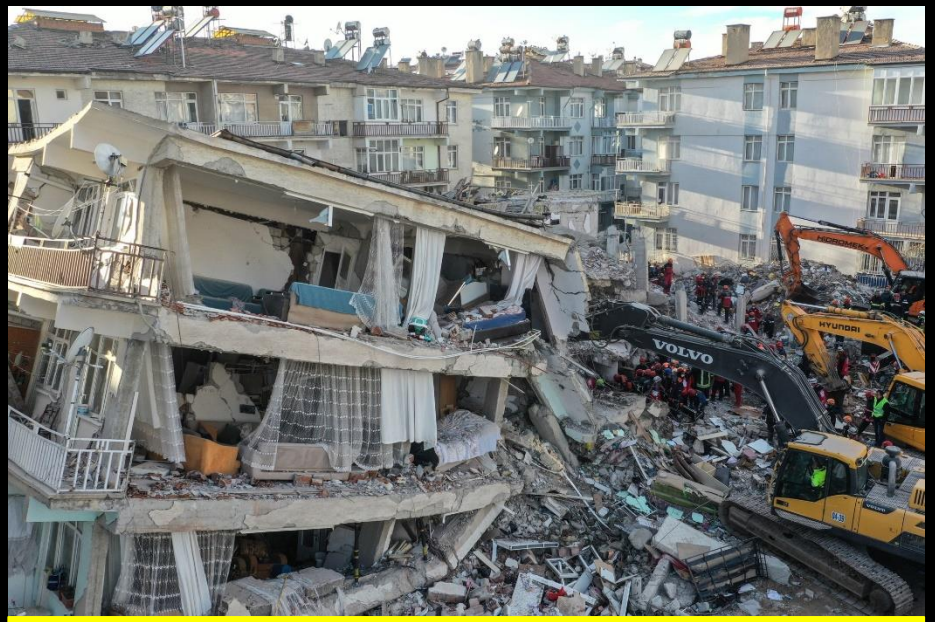
COVID-19
Yeni Ortaya Çıkan Enfeksiyon Hastalığı



COVID-19

MIS-C

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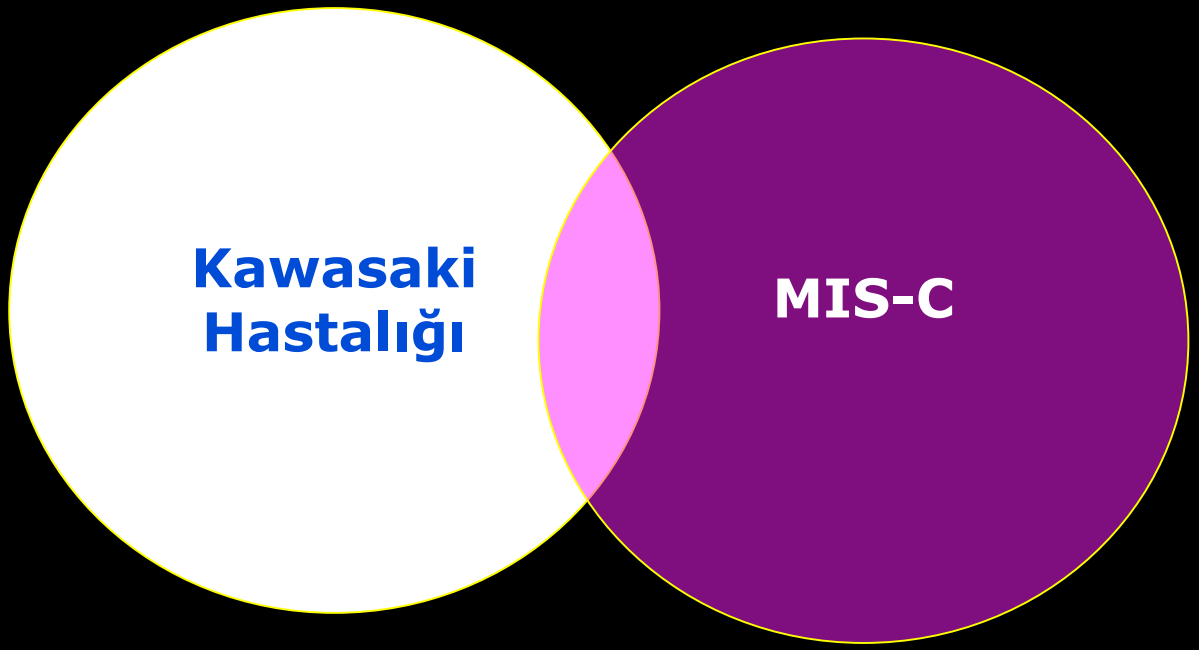
MIS-C
COVID-19 Nerede Başlıyor Nerede Bitiyor?



CDC	WHO
Yaş: ❑ <21 yaş **Ateş:** ❑ ≥24 saat > 38.0°C veya ❑ ≥24 saat süren subjektif ateş **Enflamasyonun laboratuar kanıtı:** ❑ CRP ↑, ESR ↑, Fibrinojen ↑, Prokalsitonin ↑, D-dimer ↑, Ferritin ↑, LDH ↑, IL-6 ↑, Nötrofili, Lenfositopeni, Hipoalbüminemi **Multi organ tutulumu : ≥2 organ sistemi:** ❑ KVS: Şok, troponin ↑, BNP ↑, anormal EKO, aritmi ❑ SS: Pnömoni, ARDS, pulmoner emboli ❑ Nefrolojik: ABY ❑ SSS: Nöbet, aseptik menenjit, SVO ❑ Hematolojik: Koagülopati ❑ GİS: Karın ağrısı, kusma, ishal, KCFT ↑, ileus, kanama ❑ Dermatolojik: Eritrodermi, mukozit, diğer döküntüler Hospitalizasyon gerektiren ciddi hastalık **SARS-CoV-2 enfeksiyonu veya teması:** ❑ SARS-CoV-2 RT-PCR + ❑ Seroloji + ❑ Antijen testi + ❑ Semptomların başlamasından önceki 4 haftada COVID-19 teması **Alternatif tanı olmaması**	**Yaş:** ❑ 0-19 yaş **Ateş:** ❑ 3 gün ve üzeri süren ateş **Artmış inflamasyon yanıtı** (ESR, CRP veya prokalsitonin) **Multi organ tutulumu: ≥2** ❑ Döküntü, bilateral nonpürülan konjunktivit veya mukokutanöz inflamasyon (ağız, el/ayaklar) ❑ Hipotansiyon veya şok ❑ Kardiyak disfonksiyon, perikardit, valvülit veya koroner anormallikler (EKO veya troponin / BNP ↑) ❑ Koagülopati varlığı (uzamış PT veya PTT; yüksek D-dimer) ❑ Akut GİS semptomlar (ishal, kusma veya karın ağrısı) **SARS-CoV-2 enfeksiyonunun kanıtı:** Herhangi biri: ❑ SARS-CoV-2 RT-PCR + ❑ Seroloji + ❑ Antijen testi + ❑ COVID-19 olan bir kişiyle temas **Bakteriyel sepsis ve stafilokok/streptokoksik toksik şok sendromları dahil başka mikrobiyal enflamasyon nedeni olmaması**