

# A Case of Kawasaki Disease with Disciform Keratitis and Anterior Uveitis Introduction

## Diskiform Keratit ve Anterior Üveitli Bir Kawasaki Hastalığı Olgusu

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### ABSTRACT

To report a case of Kawasaki disease (KD) with disciform keratitis and anterior uveitis. A 12-year-old male case with KD presented with a visual acuity of 6/10 in both eyes. Biomicroscopic examination showed corneal stromal edema, anterior uveitis and disciform keratitis with keratic precipitates. Pacimetric examination revealed corneal thickening in both eyes. Tonometry and fundoscopic examination was normal. After medical treatment visual acuity increased to 10/10 in both eyes and corneal edema and anterior uveitis resolved. KD presents often with ocular findings. Ophthalmologic consultation is helpful for early recognition of the KD and for treatment of cases with ophthalmic complications.

**Key Words:** Kawasaki disease, disciform keratitis, anterior uveitis.

### ÖZ

Diskiform keratitli ve anterior üveitli bir Kawasaki hastalığı (KH) olgusunu sunmak. KH tanılı her iki gözünde görme azalması ve kızarıklık olan 12 yaşındaki erkek olguda görmeler her iki gözde 6/10 düzeyinde idi. Biyomikroskopik muayenede korneal stromal ödem, anterior üveit ve keratik presipitatlar ile birlikte bulunan diskiform keratit saptandı. Yapılan pakimetrik ölçümde her iki gözde korneada kalınlık artışı saptandı. Tonometri ve fundoskopik muayene doğal olarak saptandı. Olguya uygulanan medikal tedavi sonrasında görme keskinliğinin her iki gözde 10/10'a ulaştığı ve kornea ödeminin ve anterior üveitin gerilediği saptandı. Göz bulgularının KH'a sıkça eşlik eder KH'nın erken tanısında ve oftalmik komplikasyonların tedavisinde oftalmolojik konsultasyon faydalıdır.

**Anahtar Kelimeler:** Kawasaki hastalığı, diskiform keratit, anterior üveit.

### INTRODUCTION

Kawasaki disease (KD), also known as mucocutaneous lymph node syndrome, is a systemic vasculitis of unknown etiology that affects the small and medium-sized blood vessels. Diagnosis of KD is based on 5 characteristic clinical features.<sup>1,2</sup>

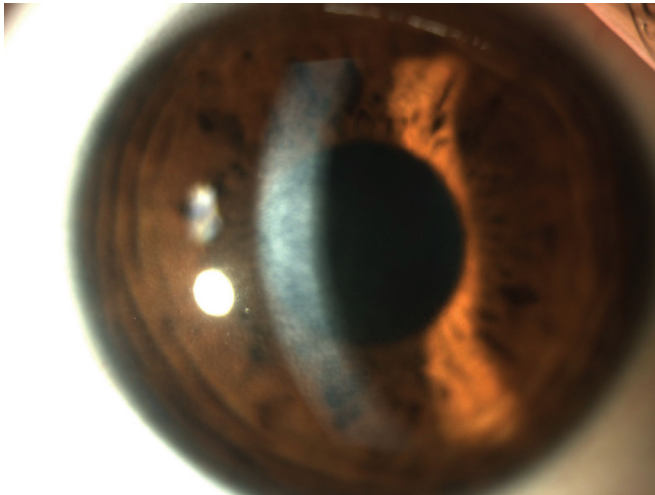
Bilateral non-exudative, painless bulbar conjunctival injection is one of the classical diagnostic criteria for KD, present in 95 % of cases.<sup>3,4</sup> Iridocyclitis (83%), superficial punctate keratitis (22%), vitreous opacities (12%), papilledema (12%), and subconjunctival hemorrhage (6%) also may occur.<sup>3-5</sup> Less common manifestations usually are limited to case reports such as bilateral inner retinal ischemia due to thrombotic occlusion,<sup>6</sup> orbital myositis,<sup>7</sup> periorbital vasculitis,<sup>8</sup> scarring of the fornixes,<sup>9</sup> ptosis,<sup>10</sup> facial nerve palsy,<sup>11,12</sup> sudden unilateral blindness due to ophthalmic artery obstruction<sup>13</sup> and dacryocystitis.<sup>14</sup> To our knowledge only 2 cases of KD with disciform keratitis<sup>15,16</sup> has been reported previously.

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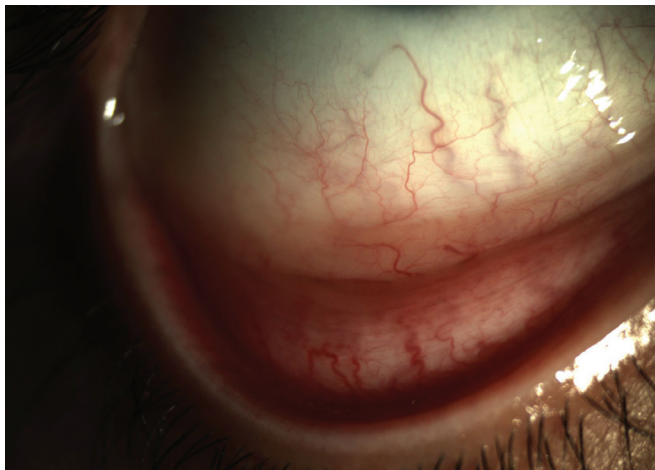
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**Figure 1:** Disciform keratitis and anterior uveitis.



**Figure 2,3:** Anterior segment examination revealed bilateral non-purulent bulbar conjunctival congestion, without any follicles or papillae.

## CASE REPORT

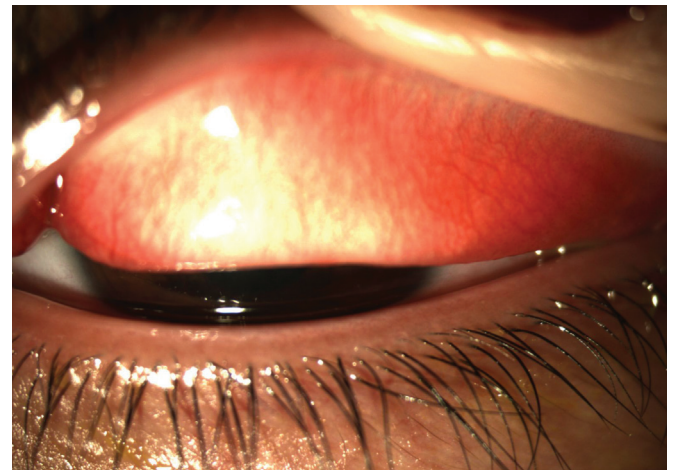
We report a 12-year old case of KD with disciform keratitis and anterior uveitis (Figure 1). Two weeks after onset of fever, he complained of cloudy vision and redness in both eyes. At presentation, his visual acuity was noted as 6/10 in both eyes. Anterior segment examination revealed bilateral non-purulent bulbar conjunctival congestion, without any follicles or papillae (Figure 2,3). Bilateral central stromal edema with localized keratic precipitates and mild anterior chamber reaction, which are characteristic signs of disciform keratitis, were noted. Slit-lamp examination showed multiple non-pigmented keratic precipitates, especially inferiorly and mild anterior chamber reaction (+1 cells) in both eyes.

Conjunctival injection, iridocyclitis and stromal edema were bilateral and both eyes had the same degree of inflammation. Pachymeter revealed corneal thickening (606  $\mu\text{m}$  OD and 611  $\mu\text{m}$  OS) due to stromal edema (Figure 4). Intraocular pressure was 10 mmHg OD and 12 mmHg OS by air-puff tonometry.

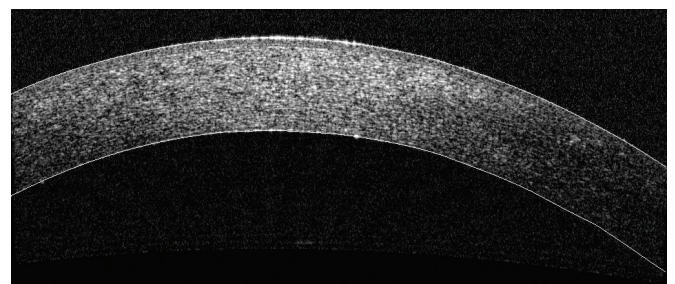
Vitreous showed no inflammatory activity and funduscopy was normal. Systemic signs responded well to treatment with intravenous immunoglobulin (IVIG) and high-dose aspirin. Ocular signs were treated with frequently used topical corticosteroids (prednisolone acetate) and cycloplegic drugs. Treatment was tapered and stopped after 3 weeks. Anterior uveitis and stromal edema resolved completely and visual acuity improved to 10/10 in both eyes.

## DISCUSSION

KD is an acute systemic vasculitis of unknown etiology that most frequently affects children under 5 years of age and is more common in males.<sup>1,2</sup> Slit lamp examination is very helpful in differentiating patients with KD from patients with other diseases characterized by fever, rash and bilateral conjunctivitis.



Referral to a pediatric ophthalmologist early in the course of the illness can help in the diagnosis of this disease. Conjunctivitis and anterior uveitis in KD are self-limited processes that resolve spontaneously without topical steroids. Less common manifestations that are mentioned as case reports like disciform keratitis,<sup>15,16</sup> papilledema,<sup>5</sup> vitreous opacities,<sup>5</sup> retinal ischemia due to thrombotic occlusion<sup>13</sup> and periorbital vasculitis<sup>8</sup> can cause severe vision loss and should be treated immediately.



**Figure 4:** Pachymeter revealed corneal thickening (606  $\mu\text{m}$  OD and 611  $\mu\text{m}$  OS) due to stromal edema.

A study by Blatt et al found that pediatricians seldom consider the eye redness significant enough to ask for ophthalmologic consultation. Diagnosis of KD has been reported to be delayed in up to 45% of cases due to lack of complete diagnostic criteria at presentation, leading to a delay in treatment.<sup>17</sup>

Consultation with an ophthalmologist is helpful for early recognition of the disease, especially in identifying incomplete cases, those which lack of the classical systemic signs and is very helpful for treatment of cases with ophthalmic complications. Our case highlights the importance of a detailed ocular examination in children with KD.

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