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Research Article

EXUDATIVE TONSILLITIS: A DISTINCTIVE MANIFESTATION OF KAWASAKI DISEASE

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ABSTRACT

This paper reports a case of Kawasaki Disease (KD) with an unusual manifestation: exudative tonsillitis. Kawasaki Disease is an acute systemic vasculitis that predominantly affects children under five years old. Its clinical manifestations are diverse and often resemble other infectious diseases such as scarlet fever and adenovirus infection, leading to misdiagnosis and delayed treatment. In this case, the patient exhibited fever, exudative conjunctivitis, exudative tonsillitis, strawberry tongue, and desquamation of the perianal area and fingertips during the course of the disease. Through a comprehensive analysis of the patient's clinical manifestations, laboratory test results, and imaging findings, the patient was eventually diagnosed with incomplete Kawasaki Disease. After treatment with high-dose intravenous immunoglobulin (IVIG) and aspirin, the symptoms were relieved. This case highlights the importance of considering Kawasaki Disease in the differential diagnosis of similar symptoms to improve diagnostic accuracy and avoid treatment delays.

Keywords: Kawasaki Disease; Exudative Tonsillitis; Adenovirus

INTRODUCTION

Kawasaki Disease (KD), also known as mucocutaneous lymph node syndrome, is an acute systemic vasculitis that primarily affects children under five years old. It can be classified as complete or incomplete Kawasaki Disease. The etiology of Kawasaki Disease remains unclear, and there are no specific diagnostic methods. Diagnosis mainly relies on clinical manifestations, laboratory tests, and echocardiography, making clinical diagnosis challenging. KD can affect the heart, leading to coronary artery damage and aneurysms, and is a leading cause of acquired heart disease in children[1].The clinical manifestations of KD include fever, conjunctival injection, cervical lymphadenopathy, strawberry tongue, edema and desquamation of the hands and feet, and rash. Due to the lack of specificity of these symptoms and their similarity to other infectious diseases such as scarlet fever, adenovirus infection, and Epstein-Barr virus (EBV) infection, KD is often misdiagnosed or overlooked, leading to delayed treatment and an increased risk of coronary artery damage.This paper reports a case of KD with an unusual manifestation: exudative tonsillitis.

CASE REPORT

The patient, a 5-year-8-month-old girl, was admitted to the hospital with "intermittent fever for 8 days and cough for 3 days." The fever started on July 1, 2024, with a peak temperature of 40°C, recurring every 4 hours. During fever episodes, her face and trunk turned red with itching, but no rash was observed. Three days before admission, she developed paroxysmal cough with sputum, worse at night, accompanied by vomiting, sore throat, nasal congestion, and runny nose. She received intravenous antibiotics (azithromycin, cephalosporins) for 6 days outside the hospital. Her temperature stabilized from July 3 to July 4 but later recurred, prompting further evaluation at our hospital.

Upon admission, her vital signs were: T 37.0°C, P 100 bpm (regular), R 23 bpm (regular), W 16.0 kg, H 116 cm. She was alert and responsive. Physical examination revealed no jaundice, rash, or petechiae. The neck was supple without resistance, and several enlarged, non-tender, mobile lymph nodes were palpable. The lips were red, the throat was inflamed, the lingual papillae were slightly raised, and the tonsils were grade I without exudate. Respiratory sounds were coarse with few wheezes. Heart sounds were strong and regular without murmurs. The abdomen was soft without tenderness, hepatosplenomegaly, or palpable masses. Extremities were warm without edema, and muscle strength and tone were normal. Blood tests on July 6 showed elevated white blood cells and CRP. She was admitted on July 8 with a diagnosis of acute bronchitis and treated with oral azithromycin, nebulization, and fluids.

On the second day of hospitalization, the patient developed facial flushing and a scarlet fever-like rash, with some areas merging and blanching under pressure. Relevant tests showed an elevated erythrocyte sedimentation rate (ESR) and slightly increased coagulation markers. No atypical lymphocytes were seen, and EBV antibodies were negative. Mycoplasma antibodies were positive. A chest CT scan showed no abnormalities. Treatment with intravenous amoxicillin-clavulanate and oral azithromycin continued.

On the third day, the patient continued to have a fever above 39°C, with conjunctival injection and purulent discharge, and a scarlet fever-like rash. CRP was significantly elevated. Tests for respiratory pathogens were negative. An abdominal ultrasound and echocardiogram were normal, but the coronary artery was slightly widened, suggesting further observation.

On the fourth day, despite antibiotic treatment, the patient had persistent high fever, and cervical ultrasound showed enlarged lymph nodes. Given the prolonged fever, clinical manifestations, and elevated CRP, KD was suspected, although exudative conjunctivitis and lack of hand and foot edema or desquamation did not fully support the diagnosis. Further blood tests showed increased white blood cells, platelets, and ESR, with low hemoglobin and albumin, meeting the criteria for incomplete KD. High-dose IVIG and aspirin were administered, resulting in fever resolution and rash improvement. By the fifth day, the patient had a low fever, with purulent exudate on the tonsils and membranous desquamation on the perianal area and fingertips. Symptoms improved, and she was discharged on July 17.

DISCUSSION

Kawasaki Disease is an immunologic vasculitis triggered by infections in genetically susceptible children[2]. Its diverse clinical manifestations overlap with those of infectious and immunologic diseases in pediatrics[3]. Accurate diagnosis requires distinguishing KD from similar diseases. In this case, the patient's exudative conjunctivitis and tonsillitis initially suggested an adenovirus infection, which can persist in tonsillar or adenoid tissues. However, the presence of a strawberry tongue and desquamation uncommon in adenovirus infection, along with negative pathogen tests, pointed towards KD.

Incomplete KD can present with varied rashes, easily mistaken for other febrile exanthems. In this case, the scarlet fever-like rash and exudative tonsillitis could mislead clinicians to diagnose scarlet fever. However, the lack of response to antibiotics and persistent fever indicated KD. Early recognition and treatment of KD are crucial to prevent coronary artery complications, the most severe outcome of KD. Prompt treatment with IVIG and aspirin can reduce inflammation and improve prognosis[4].

Clinicians should be vigilant for atypical KD presentations, particularly in patients with prolonged fever, rash, conjunctivitis, and lymphadenopathy. Exudative tonsillitis, though rare in KD, should not be overlooked. A thorough evaluation of clinical, laboratory, and imaging findings is essential to improve diagnostic accuracy and prevent misdiagnosis. Familiarity with KD diagnostic criteria and treatment guidelines is vital. Early intervention with high-dose IVIG can prevent cardiovascular complications.

In conclusion, KD's diverse clinical features and lack of specificity pose diagnostic challenges, often mimicking other infectious diseases. Recognizing exudative tonsillitis as a potential KD manifestation underscores the need for comprehensive consideration in diagnosis. Early identification and treatment of KD are crucial for improving patient outcomes, highlighting the importance of clinical awareness and expertise.

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