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Kawasaki Disease in Black Africa : About A Case in an Eight-Year-Old Girl in Dschang

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Abstract

Kawasaki disease is a vasculitis of unknown etiology that generally occurs in infancy and childhood. It is a selflimited vasculitis of medium-sized extra-parenchymal arteries with the coronary arteries as the principal target of the inflammatory response. The acute illness is characterized by high fever, nonexudative conjunctivitis, inflammation of the oral mucosa, rash, cervical adenopathy, and findings in the extremities, including swollen hands and feet, red palms and soles, and, later, subungual peeling. Diagnosis is clinically and management is simple when immunoglobulin is available. Cardiac complications are the greatest concern and could be prevented if therapy is given early. Kawasaki disease is a rarely described entity in Africa. We report a case of a classic complete form of Kawasaki disease in a girl in Dschang. She received standard therapy with intravenous immunoglobulin and aspirin and completely recovered without complications, but she failed to be followed up. Health personal must suspect the diagnosis in a child who has had fever for at least 5 days and who fits at least four of the updated five criteria.

Keywords: Kawasaki Disease ; Black Girl ; Case Report ; Dschang ; Africa

Introduction

Kawasaki disease (KD) is an acute multisystemic vasculitis, of unknown cause, which mainly affects children under five years of age [1]. It has been described worldwide, but remains more common in Asian populations and particularly in Japan where nearly 80% of patients are under five years old, with a sex ratio of 1.5 in favor of boys [2,3]. This pan vasculitis essentially affects the medium-caliber arteries, with an elective tropism for the coronary arteries, the attack of which makes all the seriousness of the disease, conditioning the vital prognosis by the cardiac complications which can result from it (dilations and coronary aneurysms which can rupture suddenly with a fatal outcome). It is thus the first acquired heart disease in children in developed countries [1,3,4]. The clinic associates a prolonged fever of more than five days, a non-exudative conjunctival injection, a raspberry tongue with redness of the lips, a skin rash with desquamation of the feet and hands, and cervical adenopathy [3,4]. Its diagnosis is essentially clinical, based on the criteria of the American Heart Association Committee of Rheumatism and includes prolonged fever associated with four of the above criteria [4]. This diagnosis raises the indication of early treatment with immunoglobulins, intravenously, associated with aspirin at an anti-inflammatory dose [1,5]. This disease remains very poorly known in Africa with very poor data [6]. We report the case of a complete form of KD diagnosed in an 8-year-old black girl in Dschang in Cameroon. She had received the standard treatment and her outcome was favourable. However, she never kept her follow-up appointments.

Clinical Case

The case is a tall eight-year-old girl, originally from western Cameroon and residing in the town of Dschang, who had been brought in for consultation by her parents for persistent high fever, rash, odynophagia and redness of the eyes. as well as the mouth. Her illness had been evolving for seven days, beginning with a fever of 39.6°C, pain on swallowing and fatigue of increasing intensity. The parents had given her, on the first day of her illness, paracetamol 500mg to drink, with thermal defervescence. They had consulted a nurse on the third day of the disease for persistence of symptoms, as well as the appearance of joint pain and the diagnosis of angina had been made. The treatment prescribed was: Amoxicillin 500 mg three times a day combined with paracetamol 500 mg three times a day orally. She had received this treatment for three days, without clinical improvement. In addition to the persistent symptoms, the skin of the hands, feet and around the lips had started to peel off, on the second day of treatment, that is to say on the fifth day of the illness. The Parents had, this time, consulted a general practitioner, who, after examining the patient, had made the diagnosis of scarlet fever on the sixth day of the disease and had prescribed Extencillin at a dose of 1.2 MIU in intramuscular (IM). A few hours after this injection, the parents had noticed a redness of the oral cavity, especially of the tongue, in addition to the persistence of the old symptoms. The child complained of generalized pain especially in the large joints (knees, elbows wrists and ankles) and his eyes had become red, without discharge in the context of generalized rash and fatigue. The parents, more worried and convinced of a drug allergy to Extencillin, had therefore refused to continue this treatment. The general practitioner then referred the patient to the pediatrician for better care of Scarlet fever and better management of any side effects possibly linked to the drug. The parents were non-consanguineous. This child was 3 rd of a family of 4, the brothers and sisters being all in good apparent health. She had not often been ill before this episode and there were no infectious contagions. She had received vaccinations commensurate with her age and no allergic reactions had been reported by the parents previously. She had no other contributing history. On arrival, on the seventh day of illness, her physical examination revealed:

Weight 38 Kg T° 39.9°C FC 106 beats per minute FR 28 cycles per minute.

She was asthenic, presented with painless non-exudative bilateral conjunctivitis, diffuse maculopapular and scaly skin eruption scarlatiniform and predominantly on the trunk, multiple cervical lymph nodes on the right, the largest of which measured approximately 1.5 cm. There was scaling of the lips and redness of the oral cavity with a raspberry tongue. The oropharynx was congested. The joints had no signs of inflammation, even as the patient complained of pain in the knees and elbows. There was edema and desquamation of the skin of the hands and feet in glove fingers and socks. The rest of the exam was normal.

Biologically, there was an inflammatory syndrome with thrombocytosis at 476,000/mm3, hyperleukocytosis at 17,000/mm3 and mild anemia with hemoglobin level at 10.7 g/dl. CRP was 48 mg/dl. Transthoracic/Doppler echocardiography was normal, with no coronary involvement. The diagnosis of Kawasaki disease had therefore been evoked on the 7th day of the disease and the administration of acetylsalicylic acid (Aspirin) had been started, the same day, at a dose of 80 mg/Kg/day in 4 doses. , i.e. 760mg every six hour intravenously with disappearance of the fever at the 14th hour (eighth day). The delayed injection of immunoglobulins, at a dose of 2 g/kg, ie 76 g intravenously for 10 hours, had been made on the 11th day of the illness (the immunoglobulins had been ordered in France).

Aspirin was continued at a dose of 4 mg/kg after obtaining apyrexia, ie 150 mg/day throughout the hospitalization period. She was discharged on the twelfth day of the disease, much improved and in stable apyrexia and the appointment given after a month for her reassessment, in particular echocardiography. The theoretical duration of 6 weeks was recommended for the continuation of oral intake of acetylsalicylic acid at a dose of 150 mg/day. However, the patient never kept her appointment.

Discussion

In the absence of specific biological markers, the diagnosis of Kawasaki disease remains clinical. It is based on the criteria proposed by the Mucocutaneous Lymph Node Syndrome Research Committee and validated by the Center for Disease Control (CDC) combining the major criteria initially described by Kawasaki and updated by the American Heart Association [2, 5]. Fever is the constant and essential criterion for diagnosis. It is generally high (> 39°C), lasting constantly greater than or equal to 5 days and is not reduced by the prescription of antipyretics or antibiotics [2]. Differential diagnoses should be ruled out: Adenovirus, Enterovirus, EBV, Measles, Scarlet fever, Staphylococcal squamous cell syndrome, Toxic shock syndrome, Bacterial lymphadenopathy, Drug hypersensitivity, StevensJohnson syndrome, Juvenile polyarthritis, Leptospirosis [1]. We limited ourselves to clinical diagnosis due to a lack of means of eliminating other pathologies and we had all the updated diagnostic criteria. In 80% of cases the disease is found in children under five and in boys in Asian countries [1, 2]. Coronary aneurysms are the most frequent cardiac complications; they are formed in the acute phase in 15 to 25% of children, in the absence of treatment. Predictive factors have been identified: male gender, children under one year of age or over 8 years of age, delay in starting treatment with intravenous immunoglobulins or at an insufficient dose [4, 6, 7]. All patients should have echocardiography at diagnosis and in the subacute phase. Some centers repeat the ultrasound at 2 weeks, 6 weeks and 1 year after diagnosis [8] . A case of KD in a 3-year-old boy was presented in Togo by Kombate et al in 2016 [9] while Kabiala et al reported a series of 11 cases of KD in Congo from 2003 to 2014 at the Brazzaville University Hospital [10]. We presented a complete form of KD in an 8-year-old girl in Cameroon. This disease, although said to be rare, is simply been unknown and not sought after in black Africa. The administration of acetylsalicylic acid allowed a complete remission of the clinical manifestations from the fourteenth hour of treatment. We were able, in our case, to order immunoglobulins in France and they had been administered out of time. The limitations of our case were numerous and related to the difficulty in excluding differential diagnoses and in following up our patient after she was discharged from hospital, having lost to follow up. The parents, although having given their informed consent for the publication of this case, had not approved the taking and the disclosure of the images. A single echography had been performed at the time of diagnosis, which does not completely exclude late-onset cardiac complications.

Conclusion

Kawasaki disease is described worldwide with very poor data in Africa, where it is considered rare. Ignorance of this disease in sub-Saharan Africa would contribute to diagnostic error, prejudice, inappropriate care, delay in appropriate care and even death from unknown complications. In the face of any infectious symptomatology with cutaneous, oral, ocular, articular involvement and fever lasting more than five days in a child, it is necessary to think of evoking KD and eliminating differential diagnoses, if possible. The diagnosis remains clinical and the treatment simple, provided immunoglobulins are available, allowing complications to be avoided if administered early. Health personnel must remain vigilant, even in Africa. We think through this case, to contribute to sensitize the health personnel of this continent to better know this disease and to better take care of it.

Conflict of Interest

The authors declare that they have no conflict of interest regarding the publication of this case.

Contribution of the authors: All the authors contributed to the realization of this work. They all read and approved the final manuscript.

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Ethical considerations: The father of this child had given written informed consent for the publication of this case

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