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Bacille Calmette–Guerin Scar Reactivation: A Sign to Suggest Kawasaki Disease

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Kawasaki disease (KD) is a childhood, medium vessel vasculitis affecting principally the coronary arteries. It is the most common cause of acquired heart disease in developed nations. It is one of the commonest pediatric vasculitic disorders second only to IgA vasculitis. Diagnosis of KD is mostly made on the basis of criteria given by the American Heart Association,[1] which include fever for 5 or more days and 4 out of 5 main clinical manifestations, which are as follows: bilateral nonexudative conjunctival injection; erythema of oral cavity, lips, and pharyngeal mucosa, red, cracked lips; edema and erythema of hands and feet followed by periungual desquamation of fingers and toes; a scarlatiniform maculopapular rash; and non-suppurative, usually unilateral cervical lymphadenopathy.[2]

Some other features are also seen in patients with KD and may help in early diagnosis. Rezai and Shahmohammadi[3] found that erythema at Bacille Calmette–Guerin (BCG) inoculation site was a useful clinical feature. Here, we present a 4-month-old girl, who had BCG scar activation although did not have all the classic features of KD.

A 4-month-old girl presented with fever and increasing irritability for 6 days. There was a history of redness of the eyes on day 2 and 3 of the illness. The baby was being treated with antimicrobials for 5 days. On examination, the baby was irritable. Diagnosis of incomplete KD was considered in view of fever persisting for more than 5 days plus edema on dorsum of hands and feet (Figure 1), red and cracked lips along with red tongue with prominent

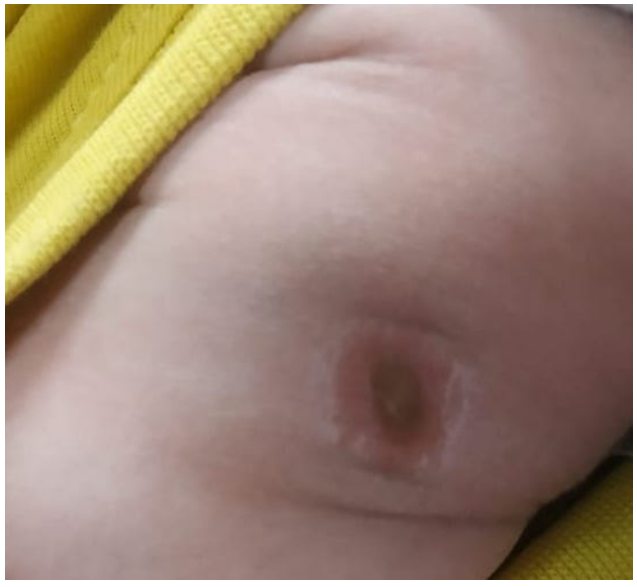

Figure 1. Bacille Calmette–Guerin (BCG) scar reactivation on upper left arm.

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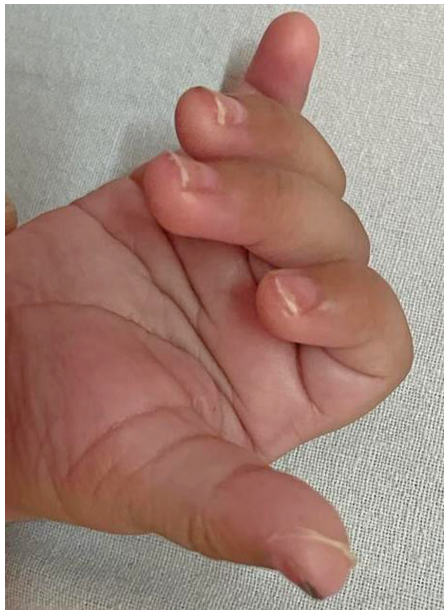

Figure 2. Desquamation over tip of thumb.

papillae and bilateral non-exudative conjunctivital injection. On examination, the site for BCG inoculation was red and prominent (Figure 2), which the mother stated, occurred 3 days back which was also supportive of our diagnosis. With a clinical possibility of KD, investigations were undertaken which revealed hemoglobin of 8.5 g/dL, total leukocyte count 31 700/mm^3, platelets 230 000/mm^3, elevated erythrocyte sedimentation rate (110 mm in the first hour), and C-reactive protein was positive (>12 mg/L). Serum sodium was 138 mEq/L and total proteins were 5.4 g/dL with albumin of 3 g/dL (low).

Two-dimensional (2D) echocardiography revealed a giant aneurysm in the left anterior descending coronary artery (z score 17). The baby was given intravenous immunoglobulins at 2 g/kg body weight and aspirin at 30 mg/kg was started. She became afebrile within 48 hours of the immunoglobulin therapy. She was also given infliximab at 5 mg/kg in view of risk factors like young age and the presence of coronary artery abnormalities. Anticoagulation with low-molecular-weight heparin was initiated in view of a giant coronary artery aneurysm. The baby started having periungual desquamation on day 9 of illness. The child was discharged on low-dose aspirin at 5 mg/kg and anticoagulation and is doing well on follow-up after 4 months of illness. Repeat 2D echo at 6 weeks showed a reduction in the size of the coronary (z score 12).

From this case report, we want to highlight that BCG scar, though does not find a place in the criteria for diagnosis of KD, its reactivation is an important finding and if present, suggests the diagnosis of KD.

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