A NEW VASCULITIS AT THE TIME OF COVID-19

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Case report. 40 days after the first autochthonous case of COVID-19 reported in Italy, we observed an “epidemic” of acute and self-healing vasculitic lesions of the hands and feet in asymptomatic children and adolescents. These lesions constituted a novelty that led us to establish a link with the other much more severe novelty, i.e. COVID-19, which also occurred almost simultaneously. This vasculitis is not the only cutaneous manifestation at the time of COVID-19, as various types of rash and urticaria have been described. Unlike the latters, however, it is very characteristic and never observed in the past; therefore, it can be a marker for epidemiological investigations. Here we describe this new skin entity and discuss the differential diagnosis from a clinical point of view, the only one currently possible in the period of health emergency in our district.

The family history highlights an important fact: in 10% of cases we see the same skin manifestations in siblings, simultaneously or at a distance of about one week, while we have not seen them in parents, even when the latter reported suspicious contacts, were infected or have had full-blown COVID-19.

The personal history is characteristic: we are dealing with healthy children and teenagers who have never suffered from acrohagosis, acrocyanosis, chilblains or vasculitis and who have no other problems besides skin manifestations. The cutaneous lesions arise in full well-being, rarely a few days after mild flu symptoms.

The symptoms reported by the patients are often important and characterized by itching, burning, difficulty in joint movements when the hands are affected, more frequently pain when the feet are affected.

The clinical manifestations affect the feet and/or hands, most often one or the other in isolation, are multifocal and often asymmetric, appearing a few at a time in 2-3 days, then undergoing a different evolution from the initial erythema (Fig. 1) to infiltration or exudation or ecchymosis (Fig. 2, the same patient as in Fig. 1 after 4 days), and eventually self-healing in 12-20 days.

At the level of the feet, in addition to being more frequent, the lesions are more severe, evolving more often towards infiltration, formation of blisters, bruising and superficial necrosis. The toes, the heel and the plantar surface are affected; these locations are usually not affected simultaneously. As regards the toes, the lesions prevail in some of them, often sparing others interposed, sometimes affecting the whole toe and ending abruptly at the metatarso-phalangeal level or other
The here described lesions do not correspond to any known disease; in some cases they remind and must be differentiated from chilblains, acrocyanosis, ischemic lesions of meningococcal sepsis or protein C deficiency, dermatomyositis, chilblain lupus erythematosus, antiphospholipid antibody syndrome, acute hemorrhagic edema of infancy and from vasculitis, such as Schoenlein-Henoch disease.

Perniosis is the condition most similar to the here described lesions; however, it stands out because it is linked to the cold and occurs in teenagers who have particular stigmata such as acrorhagiosis and acrocyanosis. Acrocyanosis does not have an acute course and is not associated with infiltrative, ecchymotic and exudative manifestations; it also affects the hands and feet in a widespread manner. Protein C deficiency occurs early in life and is characterized by major necrotic lesions. Meningococcal sepsis is accompanied by general symptoms and presents severe gangrenous lesions. The lesions of the hands may recall those of dermatomyositis, but the other skin, muscle and laboratory signs of the disease are missing; the same is true of chilblain lupus erythematosus and antiphospholipid antibody syndrome which are characterized by specific laboratory alterations. In the first two years of life, the differential diagnosis must be made from hemorrhagic edema of infancy; however, the latter has lesions also outside the hands and feet. Schoenlein-Henoch disease affects the legs more frequently than the feet and is however associated with other joint, abdominal and renal symptoms.
In the literature there are some recent papers that speak of ischemic and ecchymotic lesions of the fingers and more frequently of the toes, in patients suffering from very severe, often lethal forms of COVID-19 (1, 3, 4) and claim that these manifestations are an expression of clotting disorders. The here described manifestations are likely to be the expression of mild forms of COVID-19 in children and adolescents (2).

References


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