Clinical manifestation of systemic sarcoidosis after cutaneous filling

Manifestação clínica de sarcoidose sistêmica após preenchimento cutâneo

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ABSTRACT
Sarcoidosis is a non-infectious granulomatous disease of unknown etiology in which environmental, infectious, immunological, and genetic factors appear to be correlated. Clinical manifestations can occur in any organ, however there is predominance in the lungs and in intrathoracic lymph nodes. The cutaneous involvement of the disease occurs in roughly 25% of cases, with cutaneous filling procedures figuring as a potential trigger. The authors of the present article report a case of a patient who had granulomatous lesions on the face following cutaneous filling with hyaluronic acid. In the investigation of cutaneous lesions, the patient presented diagnostic criteria for sarcoidosis, with extensive pulmonary involvement.

Keywords: sarcoidosis; granuloma; hyaluronic acid

INTRODUCTION
Sarcoidosis is a disease that involves multiple organs, usually affects adults, with predominance in dark skin individuals and women. Its etiology remains unknown, however different factors have been implicated: polygenic inheritance, microorganisms (Mycobacterium tuberculosis, bacteria, herpes virus), exposures to mold, birds, insecticides, metals (aluminum, zirconium) and drugs such as interferon alpha. The interaction between genetic and environmental factors is probably responsible for the condition’s pathogenesis. Diagnosis is established in the presence of clinical and radiological findings, and histological evidence of non-caseous epithelioid granulomas in the involved organs, after the exclusion of other causes. Any organ can be affected by sarcoidosis’ granulomas, however pulmonary and / or intrathoracic lymph nodes involvement occur in more than 90% of cases, which are classified according to the Scadding criteria into: I) Hilar lymphadenopathy or mediastinal; II) Hilar lymphadenopathy or mediastinal and lesions of the pulmonary parenchyma; III) Lesions of the pulmonary parenchyma without adenomegalies and signs of pulmonary fibrosis; IV) Fibrosis signs in the pulmonary parenchyma. Cutaneus involvement occurs in a percentage that varies from 10 to 25%
of cases. The most common cutaneous lesion is the erythema nodosum, which generally suggests a better prognosis. Clinical polymorphism, however, is a feature of sarcoidosis. Macules, papules, plaques, nodules, erythroderma, alopecia, lupus pernio, and infiltrations in tattoos or scars might be cutaneous manifestations of sarcoidosis.\textsuperscript{1,3}

**CASE REPORT**

Five months after undergoing a cutaneous filling procedure with hyaluronic acid in the glabellar area, a 58-year-old female patient presented erythematous lesions infiltrated in both malar, left frontal and right pre-auricular regions (Figures 1, 2). Systemic symptoms (dry cough and polyarthralgia, without criteria for arthritis in the previous 4 to 6 months) were described in the initial evaluation only in the medical records and had not been a reason to seek medical attention previously, since they were non-significant and occasional. The anatomopathological examination of the skin of the right pre-auricular region demonstrated chronic granulomatous dermatis with sarcoid-like granulomas (Figures 3 and 4). A computerized tomography scan of the thorax demonstrated multiple parenchymal nodules and lymph node enlargement in the middle mediastinum (Figures 5). Radiography of hands, echography/ultrasound of abdomen, electrolytes as well as the dosage of angiotensin converting enzyme were normal. Thus, based on clinical, radiological and histological data, the diagnosis of sarcoidosis was established. The patient started to use prednisone (0.5mg day / kg). Three weeks later, with improvement of the lesions, a decision was made for gradually decrease the use of prednisone. Three months after the suspension of prednisone, the patient maintained improvement of the cutaneous condition and stabilization of the pulmonary condition. One year later, however, she reported a new outbreak, with similar development and treatment.

**DISCUSSION**

Cutaneous filling substances have been increasingly used for the correction of unaesthetic dermatoses. Products based on collagen, autologous fat, poly-L-lactic acid, calcium hydroxyapatite, polymethylmethacrylate and hyaluronic acid are approved for esthetic use.\textsuperscript{4} Despite the fact that hyaluronic acid is a com-

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**Figure 1:** Facial infiltrating erythematous lesions on the left forehead and bilaterally in the malar region

**Figure 2:** Lateral facial infiltrating erythematous lesions

**Figure 3:** Skin biopsy in the right pre-auricular region; chronic granulomatous dermatitis, (HE x 20)

**Figure 4:** Skin biopsy in right pre-auricular region; sarcoid-like granulomas; absence of foreign body reaction, (HE x 200)
Systemic sarcoidosis after cutaneous filling

REFERENCES


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