Annular sarcoidosis mimicking granuloma annulare: a case report

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ABSTRACT

Cutaneous sarcoidosis is a great imitator and we have to remember this mimicker also in the differential diagnosis of erythematous annular lesions. We report the case of a 50-year-old man with a 7-year history of erythematous, annular or serpiginous, scaly plaques on his scalp, forehead, preauricular region and around his mouth who was misdiagnosed as granuloma annulare.

Key words: Annular lesions; annular sarcoidosis; sarcoidosis.

CASE REPORT

Sarcoidosis is a multisystemic granulomatous disease which frequently involves lungs with unknown origin, and characterized by hyperactivity of cellular immune system. Skin lesions develop in 25-35% of the patients with systemic sarcoidosis which are the first, and single manifestations of the disease [1, 2].

Lesions of cutaneous sarcoidosis which are called “Great Mimickers” are divided in 2 groups as specific lesions histopathologically manifesting typical sarcoid granulomas or nonspecific lesions demonstrating inflammatory signs [3, 4]. Papular and maculopapular lesions are the most frequently seen manifestations. In this article, a case of sarcoidosis with annular, archiform, and serpiginous lesions on face, and scalp is presented because of its rarely seen clinical presentation.

A 50-year-old male patient presented to our outpatient clinics with complaints of annular skin rashes on his face, and scalp which did not regress with previously administered topical therapies. His lesions emerged 7 years ago for which he consulted to other medical centers. He was then diagnosed as tinea facialis, and granuloma annulare, and treated accordingly. His personal, and family history was unremarkable except for long-lasting complaints of respiratory distress, and coughing. On dermatological examination, multiple archiform, serpiginous, erythematous, annular and partly squamous plaque lesions localized on face, scalp, and inner aspect of the ears were detected (Figure 1). Direct fungal examination of the material retrieved from lesions...
could not reveal fungal elements. Histopathological examination of the biopsy material disclosed granulomas containing giant cells localized superficially within the dermis. The lesions were devoid of lymphocytes (naked granuloma) and concomitant necrosis (Figure 2). On laboratory analysis, ESR, CRP, serum calcium levels, calcium concentration in 24-hour urine, and angiotensin converting enzyme levels were within normal limits, while purified protein derivative test (PPD) result was evaluated as anergic (0 mm). On chest roentgenograms, and thoracic computed tomograms, bilateral hilar lymphadenopathies were detected, and together with clinical, and histopathological findings, diagnosis of stage 1 sarcoidosis was made. Topical steroidal therapy was initiated for the patient with only pulmonary and cutaneous involvement, and he was included in our follow-up protocol.

DISCUSSION

Sarcoidosis is a multisystemic inflammatory disease characterized by noncaseified epitheloid granulomas whose etiology is not known completely. It has been conceived that in genetically predisposed individuals, multiple extrinsic antigens (microbial antigens, and environmental agents) induce hyperactivation of inflammatory pathways leading to sarcoidal granulomas [5, 6]. Most frequently lungs, lymph nodes, and skin are affected. Though skin lesions can emerge at any stage of the disease, usually naked granuloma is present from the onset of the disease.

In sarcoidosis, cutaneous manifestations are classified histopathologically as “specific”, and “nonspecific” based on the presence or absence of typical granuloma. Specific lesions consist of macula, papula, nodule, plaque, subcutaneous nodule, infiltrated scar, and lupus pernio. Nonspecific lesions are erythema nodosum, ichthyosis, erythema multiforme, erythoderma, pruritus, calcifications, and Sweet syndrome [6, 7]. Nonspecific lesions frequently emerge during acute phase of the sarcoidosis, and they are associated with good prognosis. Most frequently erythema nodosum is seen. Specific lesions have a more chronic course, and worse prognosis [2, 4].

Papular, and maculopapular lesions are the most frequently seen specific lesions. Generally, they demonstrate symmetrical distribution on eyelids, periorbital region, neck, and nasolabial sulci. In patients with sarcoidosis, rarely cutaneous involvement, erythroderma, keloid formation, angiolupoid, ichthyosiform, verrucae, or Sweet syndrome should be thought [4, 9, 10].

For the diagnosis of sarcoidosis, consistent clini-
cal, and radiological findings together with presence
of noncaseified granulomas in one or more than one
tissues including skin, paratracheal lymph nodes,
and salivary glands are required. All patients with
skin eruptions should be evaluated as for systemic
involvement of mainly lungs, eye, liver, and heart
[10]. Classical histopathological findings in sarcoid-
osis comprise epitheloid histiocytes, and noncasei-
fied granulomas rarely containing Langhans type
giant cells. Typically, scarce number of lymphocytes,
and inflammatory cells are seen on the periphery of
a granuloma (naked granuloma).

During diagnostic procedures, one should not
forget that these histopathological findings are not
specific to sarcoidosis, and histopathologically in
differential diagnosis, tuberculosis, atypical myco-
bacterial infections, fungal infections, reactions to
foreign substances, and rheumatoid nodules should
be taken into consideration [7, 11].

Histopathologically presence of granuloma, and
characteristic features of granuloma facilitate the
process of differential diagnosis, and as a clinical
appearance, presence, and location of scales on the
lesion have an utmost importance. In fungal infec-
tions, subacute cutaneous lupus erythematosus,
lepra, erythema annulare centrifugum, squamae are
observed, but they are not anticipated findings in
granuloma annulare. In sarcoidosis, generally epi-
dermal alterations are observed [12].

In conclusion, in sarcoidosis, annular and ser-
piginous lesions on the face are rarely seen. Since
these lesions are evaluated as superficial fungal in-
fecion, annular elastolytic giant cell granuloma,
and granuloma annulare, diagnosis may be delayed
for years. As seen in our case, sarcoidosis should be
considered in the differential diagnosis of annular,
archiform or serpiginous lesions localized on face,
and the patients should be questioned as for poten-
tially concomitant systemic findings.

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