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Case Report

Micropapular sarcoidosis on photo exposed areas: A case report

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Abstract Sarcoidosis is a chronic granulomatous disease of unknown etiology involving multiple organs of body. Cutaneous sarcoidosis varied in morphology with follicular, papular, nodular plaque, lupus pernio and erythema nodosum are the commonest forms. We herein present a case of a middle age male who presented with micropapular lesion on photo exposed areas which turn out to be cutaneous sarcoidosis on histopathology. There was no systemic involvement. Multidisciplinary and comprehensive management approach is required in such cases. Patients' clinical features improved considerably after treatment with topical and systemic corticosteroids

Key words
Micropapular cutaneous sarcoidosis; erythema nodosum; corticosteroids.

Introduction

Micropapular sarcoidosis is a multisystem disease affecting lungs, kidney, heart, eye, skin and lymph nodes histopathologically characterized by non-caseating epithelioid granulomas. The disease usually occurs after 40 years of age with female predominance.[1]

Sarcoidosis is a condition in which multiple organs are involved. Skin is the most common involved organ after lungs in sarcoidosis. Various clinical presentation of cutaneous sarcoidosis are papules, plaques, nodules, infltrative scars, annular, psoriasiform, angiolupoid, hypopigmented, atrophic, ulcerative lesions, non-scarring alopecia, erythroderma and ichthyosiform lesions. Histopathological features are usually the same for all clinical variants of sarcoidosis.[2]

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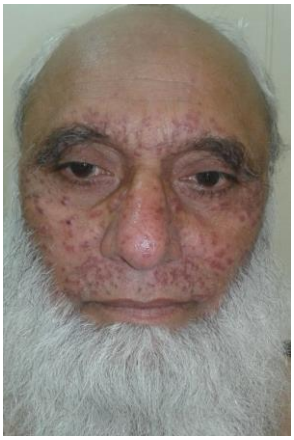
Maculopapular is the most common morphological presentation among specific sarcoidosis lesions. It may mimic other cutaneous diseases like rosacea, secondary syphilis, lupus erythematosus, trichoepitheliomata, sebaceous adenoma, granuloma annulare. Topical and systemic corticosteroid is the main stay of treatment for cutaneous involvement without other organ involvement. Second line agents are antimalarials, methotrexate or tetracycline.

Case Report

A 55-year male patient presents with mild itchy erythematous papules on neck, face and hand axilla for last 6 months duration. These lesions involved face especially forehead, nose initially and in span of 3 months spread to neck and hands. There was no history of drug intake or systemic features prior to eruption. There was no history aggravation of lesions on exposure to sunlight or any application of hair dye or drug. Patient had neither complaint any chest symptoms nor joint or eye complaints. Patients do not give any history of other skin eruption or



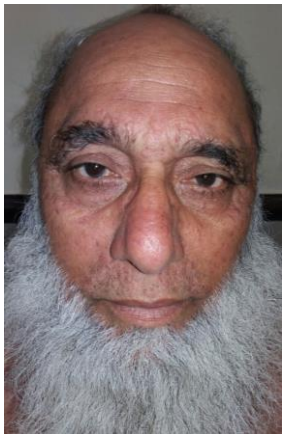


Figure 1 Before treatment. **Figure 2** After treatment.

fever with night sweats. On general physical examination and systemic including chest examination was unremarkable.

Cutaneous examination revealed infiltrative erythematous non scaly microopapular skin lesions involving cheeks, nose, forehead, back and front of neck and dorsum of hands as shown in **Figure 1** Photocontact dermatitis, papular lichen planus, papular granuloma annulare and micropapular sarcoidosis were considered in differential diagnosis.

Laboratory investigations including complete blood count, hepatic, and renal functions were normal. Serum angiotensin-converting enzyme level and calcium level were in normal range limit. A tuberculosis skin test was non-reactive. Chest radiograph, ECG, Pulmonary function tests revealed no abnormal findings. Eye examination including slit-lamp examination and echocardigram was unremarkable. Skin punch biopsy of 3mm was done from these papules. Histopathological examination of the biopsy lesions revealed multiple subepidermal non caseating (naked) granulomas composed of epithelioid histiocytes and Langhans giant cells (shown by arrow).

On basis of clinical examination and laboratory findings including skin biopsy diagnosis of

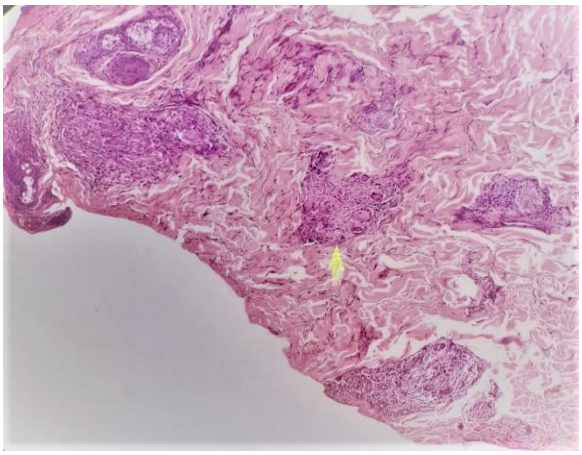


Figure 3 subepidermal multiple non caseating granulomas(shown by arrow).

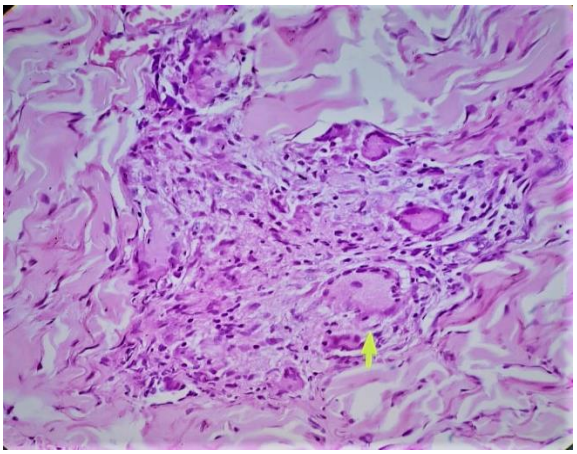


Figure 4 Langhans giant cells(shown by arrow).

micropapular sarcoid on photo exposed sites was made. Patient was treated with oral prednisolone 40 mg with supportive therapy and topical 0.1% methylprednisolone cream initially for 2 months and followed by gradual tapering of dose was done with 5 mg twice weekly for next 3 months. Topical steroid was stopped after 2 months. Systemic steroids were monitored for its side effects. Skin lesions left mild atrophic scar after treatment and patients was on follow up visits twice monthly for next six months in order to see recurrence of skin lesions or occurrence of systemic features.

Discussion

Sarcoidosis was first coined by physician DR

Jonathan Hutchinson.[3] in It is a multisystem granulomatous disease involving lungs, kidney, heart, eye, skin and lymph nodes The disease usually commence around 40 years of age with two third females among total cases.[1] It can affect patients of any race with most reported cases among African American women in the United States.[4] Variation existed in prevalence rate (10-64 per 100,000 person) of sarcoidosis in different geographical areas and races.[5]

Its exact cause is unknown but multiple etiological factors including genetic, infective agents (mycobacterial organism and Propinobacterium) and non-infective like environmental and industrial toxins has been implicated in pathogenesis of sarcoidosis.[6] Infective antigen association in etiopathogenesis had been supported by molecular and immunologic studies.[7]

Cutaneous Sarcoidosis is considered to be great imitator due to its varied morphological presentation either alone or along with organs involvement of body. Skin manifestations in sarcoidosis occurs in 20-35% of cases.[1] Skin lesions have been categorized on histological presence of non caseating granuloma as specific and nonspecific. Common specific lesions are maculopapules, plaques, nodules, lupus pernio, scar infiltration, scarring alopecia, ulcerative, annular, angiolupoid, psoriasiform and hypopigmentation. Nail and mucosal involvement may occur. Among the nonspecific lesions erythema nodosum is the most common followed by calcifications, prurigo, erythema multiforme and Sweet syndrome.[8]

Maculopapular is the commonest form of specific cutaneous lesions of sacroidosis. It occur as multiple yellowish brown or reddish brown infiltrative papules mainly involving the face around the eyes and in the naso-labial folds, neck, trunk and extremities.[9] Clinically, morphological variation existed in its colour from erythematous or reddish brown to violaceous, translucent, or hyperpigmented papule with occasionally pruritic mimicking licheniod papules. Skin biopsy of these lesions revealed noncaseating granulomas.[10,11] These papular subsides without significant scarring within of 2 year of treatment. Spontaneous resolution of papular sarcoidosis had been described. Systemic features associated with form of sarciodosis are related to acute systemic sarcoidosis such acute uveitis, erythema nodosum, hilar and peripheral lymphadenopthy and parotid enlargement.[9]

Olteanu *et al.* reported a case of photo distributed scarcoidosis consisting of annular plaques with systemic features of fever and arthralgia. In contrast, cutaneous morphology compromised of micropapular in the present case. Moreover, there were no systemic features and patient responded to topical and systemic corticosteroids in our case as compared to systemic corticosteroid and hydroxychloroquine combination therapy.[12]

Topical betamethasone and Systemic prednisone in combination with oxytetracycline, and hydroxychloroquine, have been used in maculopapular sarcoidosis with good results. Other immunosuppression agents like azathioprine, methotrexate, mycophenolate mofetil along with thalidomide thalidomide, allupurinol, isotretinoin that have been used in cutaneous scarciodosis with systemic involvement with variable results. Biological agents infliximab adalimumab are considered in refractory cutaneous sarcoidosis.[10-13]

Conclusion

This case report highlights need to consider micropapular scarcoidosis in differential diagnosis of photodistributed micropapular

morphological lesion. Awareness regarding variation in such skin condition should be kept in mind while making diagnosis, thus helping in establishing early diagnosis, planning timely management and prevention of systemic features.

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