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An Unaccustomed Presentation of Besnier-Boeck-Schaumann Disease

Authors
Dr Vani Raj I[1], Dr Suresh Raghavan[2]
[1]Junior Resident, [2]Professor
Department of General Medicine, Govt. T.D Medical College, Alappuzha, Kerala, India
Corresponding Author
Dr Vani Raj I
Junior Resident, Department of General Medicine, Govt. T.D Medical College, Alappuzha, Kerala, India

Abstract
Eliminating other potential causes of granulomatous inflammation helps to diagnose the mysterious sarcoidosis. All clinicians face a diagnostic dilemma because of the clinical polymorphism and the multisystemic sarcoidosis symptoms. After the lungs, the skin is the organ most frequently impacted by sarcoidosis. Before, during, or after systemic involvement, dermatological symptoms can occur, and the kind of skin lesion can have a bearing on the prognosis. Additionally, compared to a biopsy of visceral organs, a skin lesion biopsy is easier to perform and less intrusive. Therefore, there are some instances in which cutaneous symptoms can help with the diagnosis and outlook of a systemic illness. A high index of clinical suspicion is needed for early diagnosis and timely management, which can improve the quality of life for those patients and reduce morbidy and mortality due to this disease. This article has emphasised the prevalence, clinical characteristics, and treatment of the common skin lesions of sarcoidosis.

Background

Sarcoidosis is a systemic multisystem inflammatory disorder of unknown etiology characterized by the presence of non-caseating granulomas, with the pulmonary involvement and intrathoracic lymph nodes being the most commonly affected sites. Patients frequently suffer from cough, shortness of breath, chest pain and pronounced fatigue and are at risk of developing lung fibrosis or irreversible damage to other organs. Other relevant sites affected with significant manifestations are the skin, eyes, liver, spleen, and peripheral lymph nodes. Cardiac and neurological problems are infrequent but can be fatal.

The hallmark of sarcoidosis is the presence of noncaseating granuloma, a cluster of macrophages, epithelioid cells, mononuclear cells, and CD4+ T cells with a few CD8+ T cells in the peripheral zone.

Acute presentations are Lofgren's syndrome (Bilateral hilar lympahdenopathy, Ankle arthritis,

erythema nodosum and constitutional symptoms) or Heerfordt's syndrome (fever, parotid gland enlargement, facial plasy and uveitis). Chronic sarcoidosis is insidious in onset and its symptoms are related to the organs involved (lungs, eye, heart, skin, lymph nodes. Here is an infrequent presentation of Alopecia in a female who came to our outpatient department.

Case Report

A 59 year old Female with no known comorbidities (No h/o Type 2 DM, Systemic hypertension, Dyslipidemia, past h/o skin or scalp diseases, no other systemic diseases) presented with history of loss of hair over scalp at multiple sites along with which she noticed Discoloration of skin of affected area. But no history of itching or any other systemic symptoms/manifestations.

On Examination:

Patient is conscious, oriented with vitals stable. No pallor, icterus, cyanosis, clubbing, lymphadenopathy or pedal edema.

Local examination: Scalp showed multiple areas of alopecia with maculopapular skin lesions. Skin thickened and fibrosed with wrinkling. Reddish granular brown colour tissue present over affected area.No bleeding on touch, No itching, No evidence of dandruff.

Systemic examination findings were within normal limits.

So, Systemic examination including respiratory system and ophthalmologic examination were found to be normal. No granuloma formation.

Investigations revealed normal routine blood examination except for an ESR of 90mmHg ,Serum calcium, Serum ACE Levels. Other investigations like LFT,RFT, lipid profile, TFT were normal, ANA Profile, Anti dsDNA were negative. Blood sugar, serum electrolytes, urine routine were normal, Viral Markers-negative. Blood Culture including fungal culture-negative. Serum polysaccharide Antigen Assay test for Histoplasma-Negative.

CT Abdomen+ pelvis showed: No significant intrabdominal lymph nodes seen. Bulky uterus with fibroids.

CT Thorax showed : Multiple bilateral discrete hilar and mediastinal lymph nodes are seen Largest 21mm in SAD with few of them showing ca++.Few peri bronchovascular irregular nodules seen 5-15mm in size predominantly in the upper and mid zones bilaterally. Feature suggestive of **Stage 2 sarcoidosis**

TBNA sample cytology:

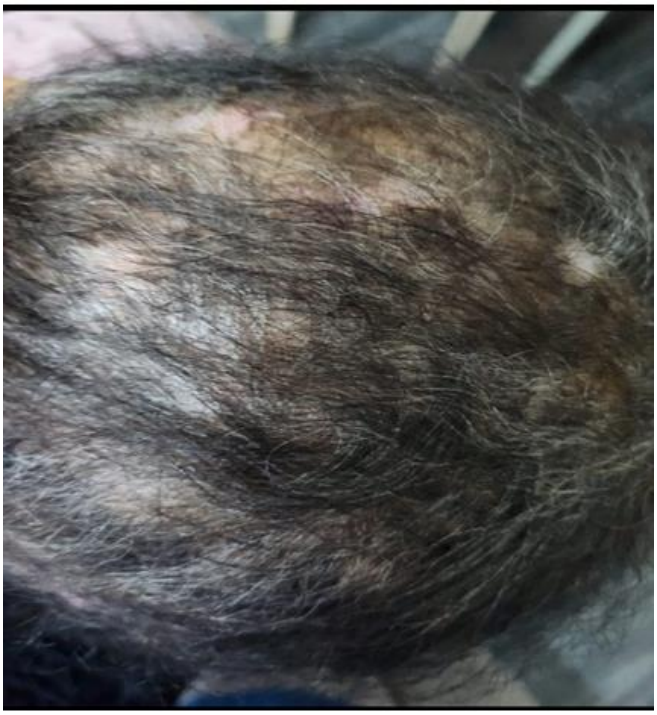
- No Definite Granulomas seen.
- No evidence of malignancy in the smears examined.

Scalp skin biopsy (Thick scaling of scalp x 5 years with removal of scale Resulting in cicatrical alopecia) showed

Non caseating granulomatous lesion with

Differential diagnosis:

1. Sarcoidosis
2. Tuberculosis



Scalp showing multiple areas of alopecia with maculopapular skin lesions

Discussion

The multisystemic nature of sarcoidosis leads to organ specific manifestations. Symptoms may differ from patient to patient. Most clinical studies agree that owing to the multi-organ and system granulomatous potential of sarcoidosis, a multifaceted approach is necessary to evaluate the possibility of extrapulmonary localizations of this disease. Sarcoidosis is usually diagnosed when radiological and typical clinical data are reinforced by histological confirmation of non-necrotic granulomas. To establish any confirmed diagnosis, patients should undergo multiple clinical examinations, depending on organ involvement, as a specific diagnostic assay is still lacking

The **diagnosis** of CS requires a biopsy and histopathological examination, as well as a morphological presentation. It is important to consider sarcoidosis in the differential diagnosis of different skin lesions. Histopathologically, it is necessary to differentiate it from leprosy and lupus vulgaris because they all have epithelioid cell granulomas. In contrast to granulomas in lupus vulgaris, which are caseous and found in the upper dermis, those with leprosy are primarily located around dermal nerve twigs and are combined with lymphocytic infiltration. Sarcoidal granulomas are surrounded by scanty lymphocyte cuffing (naked tubercles) with fine reticulin fibers in and around the tubercles, making them distinct, uniformly distributed in the dermis. When a skin biopsy raises suspicion of sarcoidosis or a diagnosis of sarcoidosis is expected, a systemic assessment Is required, which includes a detailed history, physical examination, and laboratory and radiographic evaluation. The Kveim-Siltzbach skin test, which involves injecting spleen or lymph-node homogenate from a sarcoidosis patient intradermally and then performing a biopsy, is not generally available, standardized, or Food and Drug Administration (FDA) -approved for general use.

Treatment options are primarily based on circumstantial evidence. Observation without therapy is recommended, as most lesions are asymptomatic and often resolve spontaneously. However, disfiguring and extensive skin lesions associated with severe systemic illness require treatment. Treatment for CS should be done in stages, considering the risks and benefits of the therapy, with local therapies first (topical and intralesional steroids, tacrolimus, and topical retinoids) and then systemic immunomodulatory treatments (hydroxychloroquine, chloroquine, tetracyclines, thalidomide) alone or in combination, and finally, systemic immunosuppressive drugs such as methotrexate, prednisone, azathioprine and tumor necrosis factor (TNF) inhibitors (adalimumab, infliximab)

Small papules and plaques are often treated effectively with monthly intralesional triamcinolone injections. Treatment with a topical corticosteroid and a hydrocolloid occlusive dressing on a weekly basis can also be useful. Clinical improvement was reported in refractory cases of sarcoidosis by using topical tacrolimus twice daily. Although antimalarials chloroquine phosphate and hydroxychloroquine are an effective alternative therapy for cutaneous sarcoidosis lesions, the danger of chloroquine-induced retinopathy is alarming. It can be prevented with a carefully calculated daily dosage and regular six-month ophthalmologic follow-up examinations. The antibiotics minocycline and doxycycline may help treat CS because of their anti-inflammatory properties. Treatment with tetracyclines may also benefit even though actual efficacy is not proven .Thalidomide and tranilast have improved outcome in case of resistance. Treatment with systemic immunosuppressive therapy, such as systemic corticosteroids (prednisone), methotrexate, and azathioprine, should be considered sooner in patients with severe, disfiguring, or resistant illness or in patients with LP. Given the multitudinous side effects caused by systemic corticosteroids, the use

of steroid-sparing agents, such as methotrexate and azathioprine, has been advantageous. Symptomatic improvement was noticed with low-dose methotrexate in patients with persistent and symptomatic sarcoidosis, as reported by E E Lower et al. The therapeutic response, however, could take up to six months. Hematological, gastrointestinal, hepatic, and pulmonary toxicities are among the most common side effects reported with the usage of methotrexate. TNF inhibitors adalimumab and infliximab are effective in treating severe, ulcerative, or refractory sarcoidosis, as well as patients with LP who have not responded to conventional treatments. Even though several therapeutic options are discussed in the literature, there is no consistently effective treatment for sarcoidosis .A biopsy, histological analysis, morphological presentation, and the diagnosis of CS are all necessary. Sarcoidosis must be taken into account when making a differential diagnosis of various skin conditions. It must be distinguished histopathologically from leprosy and lupus vulgaris since they share epithelioid cell granulomas. Leprosy-related granulomas, in contrast to those in lupus vulgaris, are primarily found near dermal nerve twigs and are associated with lymphocytic infiltration. Lupus vulgaris granulomas are caseous and found in the upper dermis. Sarcoidal granulomas are distinct, consistently distributed in the dermis, and are encircled by sparse lymphocyte cuffing (naked tubercles) and fine reticulin fibres in and around the tubercles. When a skin biopsy suggests sarcoidosis or when a sarcoidosis diagnosis is anticipated, a systemic

Assessment is necessary, which involves a thorough history, a physical exam, a lab and radiographic evaluation, and more. The Kveim-Siltzbach skin test, which entails injecting lymph node or spleen homogenate from a patient with sarcoidosis intradermally and subsequently taking a biopsy, is not usually accessible, standardised, or FDA-approved for widespread usage.

The majority of treatment choices are supported by circumstantial evidence. Given that the majority of lesions are asymptomatic and frequently go away on their own, observation without treatment is advised. However, serious systemic illness-related skin lesions that are disfiguring and widespread need to be treated. Topical and intralesional steroids, tacrolimus, and topical retinoids should be used as local therapies first, followed by systemic immunomodulatory therapies (hydroxychloroquine, chloroquine, tetracyclines, thalidomide), taking into account the risks and benefits of the therapy.

Systemic immunosuppressive medications such methotrexate, prednisone, azathioprine, and TNF inhibitors (adalimumab, infliximab) are also used in combination.

A monthly intralesional triamcinolone injection regimen is frequently beneficial in treating small papules and plaques. Weekly use of a hydrocolloid occlusive dressing and a topical corticosteroid may also be beneficial. By applying topical tacrolimus twice daily to resistant instances of sarcoidosis, clinical improvement has been observed. The risk of chloroquine-induced retinopathy is concerning, despite the fact that the antimalarials chloroquine phosphate and hydroxychloroquine are an effective alternative therapy for cutaneous sarcoidosis lesions. With a carefully calculated daily dosage and routine, every six months, ophthalmologic follow-up exams, it can be avoided. The anti-inflammatory qualities of the medicines minocycline and doxycycline may aid in the treatment of CS. Despite the fact that tetracycline therapy may also be advantageous. Systemic immunosuppressive medications such methotrexate, prednisone, azathioprine, and TNF inhibitors (adalimumab, infliximab) are also used in combination.

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tacrolimus twice daily to resistant instances of sarcoidosis, clinical improvement has been observed. Although cutaneous snoactual effectiveness of antimalarials chloroquine phosphate and hydroxychloroquine has not been shown, they are an effective alternative therapy.In cases of resistance, thalidomide and tranilast have improved results. In patients with severe, disfiguring, or resistant illness or in patients with LP, treatment with systemic immunosuppressive therapy, such as systemic corticosteroids (prednisone), methotrexate, and azathioprine, should be considered sooner. Givenva monthly intralesional triamcinolone injection regimen is frequently beneficial in treating small papules and plaques. Weekly use of a hydrocolloid occlusive dressing and a topical corticosteroid may also be beneficial. The use of steroid-sparing medications, such as methotrexate and azathioprine, has been beneficial in clinical studies of the numerous negative effects that systemic corticosteroids induce. According to E E Lower et al., patients with persistent and symptomatic sarcoidosis saw symptomatic improvement after taking low-dose methotrexate. However, the healing process could take up to six months. Among the most frequent adverse effects include haematological, gastrointestinal, hepatic, and pulmonary toxicities. Adalimumab and infliximab, ef inhibitors, are useful in treating individuals with LP who have not responded to standard therapies as well as those with severe, ulcerative, or refractory sarcoidosis. Even though There is no consistently efficient sarcoidosis treatment, despite the literature's discussion of a number of therapeutic possibilities.

Conclusion

Sarcoidosis has a variety of clinical manifestations and may resemble a number of different diseases, making diagnosis and treatment difficult for clinicians. A definitive diagnosis of sarcoidosis cannot be made based solely on the presence of noncaseating granulomas; other potential causes of granuloma formation must first be ruled out.
After the diagnosis has been made, the severity of the condition should be systematically assessed.
This should at the very least involve taking a patient's history, performing a physical exam, measuring their calcium, liver enzyme, and creatinine levels, performing a urinalysis, getting an ECG, and having their eyes checked. Patients who have incapacitating symptoms or progressive organ failure should receive treatment. The cornerstone of therapy is glucocorticoids, despite the fact that the appropriate dose and duration are uncertain because to the dearth of data from randomised controlled research. For patients with corticosteroid-resistant diseases or those who are intolerant to corticosteroids, methotrexate is the most frequently utilised corticosteroid-sparing medication. In refractory instances, recent results have supported the use of TNF-inhibitors, particularly infliximab.

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