

Systemic lupus erythematosus camouflaging: As refractory acne in a young girl

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ABSTRACT

Cutaneous manifestations of systemic lupus erythematosus (SLE) are important diagnostic criteria as described by the revised American College of Rheumatology and Systemic Lupus International Collaborating Clinics. Patients usually present with various lupus-specific cutaneous manifestations such as malar rash, discoid rash, photosensitivity, and alopecia. Acneiform presentation of SLE is extremely rare. Review of the literature using PubMed has found only nine other reports so far. Here, we report a case who was initially treated as acne and later diagnosed as SLE.

Keywords: Acne, cutaneous lupus, systemic lupus erythematosus

Introduction

Cutaneous lupus erythematosus is three times more frequent than systemic lupus erythematosus (SLE).^{1,2} Cutaneous manifestations can be acute, subacute, or chronic. Acute cutaneous lupus commonly manifests as malar erythematous rash and is frequently associated with systemic disease. The most common manifestation of chronic cutaneous lupus is discoid lupus erythematosus (DLE) which presents as indurated erythematous plaques and papules that can result in significant scarring and alopecia. Patients with subacute cutaneous lupus are photosensitive and present with erythematous papulosquamous or annular polycyclic plaques. These classical lesions are diagnostic for SLE. However, there are atypical lesions that can mimic benign dermatologic disorders such as acne. Acneiform presentation of SLE is extremely rare. This not only poses diagnostic dilemma but also leads to delayed diagnosis. We report a young girl who was initially treated as acne by various local physicians and later diagnosed as a case of SLE.

Case Summary

A 20 year old girl presented to us with complaints of inflammatory lesions on face, neck, back, and abdomen for 8 months. She was diagnosed with grade II acne and treated with isotretinoin by local physicians. But there was not much improvement despite standard care and was diagnosed to have refractory acne. Then she got admitted to the medical ward. On examination, the patient had erythematous-infiltrated papules over the face, neck, back, and abdomen [Figures 1-4]. There was no history of photosensitivity. There was history of mild hair loss and pain in multiple joints along with myalgia. Her vital parameters were within normal limits. Examination of all the systems did not reveal any abnormality. Her hemoglobin was 13.2 g/dL, total leucocyte count was 9700/mm³, and platelet count was 107,000/mm³, and liver function tests, renal function tests, and blood glucose levels were within normal limits. Routine urine examination did not reveal any abnormality. Antinuclear antibodies (ANA) and antidouble-stranded DNA were highly positive. Anti-SSA, anticardiolipin, IgM, and IgG antibodies to B2 glycoprotein I complex and lupus anticoagulant were negative. Serum complement levels (C3, C4) were within normal limits. Direct Coombs test was positive. Serum vitamin B12 and folic

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Figure 1: Maculo-Papular rashes over face



Figure 2: Maculo-Papular-Pustular rashes over back



Figure 3: Papular rashes over neck



Figure 4: Pustular rashes over abdomen



Figure 5: Mild pigmentation over face



Figure 6: Residual pigmentation over back

acid were found to be normal. Her thyroid-stimulating hormone was found to be 24.2 IU/mL. Serum vitamin D was at 15.1 ng/mL. Based on the clinical picture and investigation findings, she was diagnosed to have SLE, hypothyroidism, and vitamin D deficiency. Treatment was initiated with methotrexate 15 mg

once a week, folic acid 5 mg once daily for 2 days in a week, and hydroxychloroquine 200 mg once daily. She was advised to take deflazacort 15 mg daily for 6 weeks followed by 12 mg daily for another 6 weeks. Currently, she is on maintenance steroid therapy, thyroxine, and vitamin D supplementation. She improved

dramatically and the macula-papulopustular lesions became less prominent, with only residual skin pigmentation [Figures 5 and 6]. She is doing well and following up with us regularly.

Discussion

As per Systemic Lupus International Collaborating Clinics (2012) and American College of Rheumatology (1997), cutaneous manifestations are important diagnostic criteria for SLE which can be acute, subacute, or chronic. Acute cutaneous lupus manifests as typical maculopapular malar butterfly rash which are photosensitive. Subacute cutaneous lupus presents with nonindurated and/or annular polycyclic lesions which resolve without scarring and occasionally with postinflammatory dyspigmentation. Chronic cutaneous lupus usually presents with classic discoid rash either localized or generalized as verrucous lesions. Patients usually present with lupus-specific skin lesions such as malar rash, discoid rash, photosensitivity, and alopecia. However, there are atypical lesions that can mimic benign dermatologic disorders such as acne. Acneiform presentation of SLE is extremely rare.

Acne is a common condition affecting millions of population worldwide, especially young girls. Most of the presentations of acne are pleomorphic, manifesting with a variety of lesions consisting of comedones, papules, pustules, and nodules. It primarily affects areas of the skin with a relatively high number of oil glands, including the face, the upper part of the chest, and back which were seen in our patient too. Many dermatologic conditions can mimic acne and are collectively known as acneiform eruptions. Our case also belongs to this category. Mild acne is defined by the presence of comedones limited to the face with occasional inflammatory lesions. A higher number of inflammatory papules and pustules occur on the face compared with mild cases of acne, and its presence on the trunk signifies moderately severe acne which was there in our case. Severe acne is characterized by extensive nodular lesion over face and trunk. It is considered as a trivial and transitory disease of adolescence.

In a literature review, we found nine other cases of acneiform presentation of lupus erythematosus. Three cases were SLE and seven others were diagnosed as chronic cutaneous lupus erythematosus. All three patients who had SLE tested positive for ANA, and only one patient with CLE had a low titer of positive ANA (1:80). Our patient was strongly positive for ANA. Motel *et al.* also reported two cases of SLE who were initially diagnosed as refractory acne.^[3] Deruille-Khazaal *et al.* reported a 30-year-old lady with lesions of acne leading to the diagnosis of chronic lupus erythematosus, and who subsequently developed SLE.^[4] A case of DLE masquerading as acne vulgaris was also reported by Stavrakoglou *et al.*^[5] Ocampo and Haider reported a 28-year-old woman who presented with an erythematous rash involving the nose, nasolabial folds, and philtrum that appeared after she had manipulated a painful vesicular lesion at the base of her nose that she believed to be a pimple. Later, after investigations it was diagnosed as DLE.^[6] Vieira *et al.* reported a 32-year-old

women who presented with 2-year pruritic infiltrated acneiform and comedonal eruption on the right chin treated as acne and later diagnosed as chronic cutaneous lupus erythematosus.^[7] Farias *et al.* also reported a 35-year-old female who presented a pruriginous acneiform eruption on the face for 2 years, which did not respond to conventional treatments for acne which was later diagnosed as chronic cutaneous lupus erythematosus.^[8]

The misconceptions that acne is a trivial condition and does not require medical attention is wrong. Hui discussed in detail about the misconceptions about acne.^[9] People usually seek the help of family physicians in case of acne. They even go to several nonmedical personnel and seek doctor's help after a considerable period of delay due to lack of awareness. The case reported by us may be the tip of the iceberg. There may be more hidden and unreported cases. Family physicians play a key role in connecting these cases and diagnose them at the earliest, ensuring definitive treatment.

Conclusion

Cutaneous manifestation of SLE is a autoimmune disease which may mimic some other clinical conditions. It may resemble acne especially in young girls, causing diagnostic difficulties. Acneiform lesions are atypical presentations of SLE. Refractory acneiform eruption despite an adequate treatment regimen should alert the family physician to investigate further. A high degree of clinical suspicion and awareness will not only shorten the diagnostic delay but also enhance early detection and treatment of these cases.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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