

Squamous Cell Carcinoma Arising From Discoid Lupus Erythematosus Lesion on Pinna of Right Ear within A Short Period of Time

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Abstract: DLE/CLE is a benign disorder of skin most frequently involving the face, characterized by well defined red scaly plaques of variable sizes that heal with atrophy, scarring and pigmentary changes. The histology is characteristic. Squamous cell carcinoma can rarely arise within a longstanding DLE plaque in the skin particularly over scalp, ears, lips and nose. It presents as an enlarging warty growth or ulcer. We report a case of squamous cell carcinoma which developed on lesion of discoid lupus erythematosus within a short period of time.

Keywords: Discoid lupus erythematosus, Squamous cell carcinoma, Carpet tack sign

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I. Introduction

Discoid lupus erythematosus (DLE) is a benign disorder of the skin, clinically characterized by red scaly plaques which heal with atrophy, scarring and pigmentary changes, and histopathologically characterized by vacuolar degeneration of basal cell layer of epidermis and patchy dermal lymphocytic infiltrate. Malignant transformation is rare complication of this condition.^[1] It is rarer still in a lesion of short duration. We report a case of squamous cell carcinoma (SCC) developing over lesion of discoid lupus erythematosus within a shortest period of time of 4 months.

II. Case Report

A 52 year old female patient developed multiple erythematous to depigmented plaques over forearms, back and right ear since 8 months. These plaques and atrophic patches were present initially on the right forearm; later gradually progressed to develop on the left forearm, lower and upper back and right ear. The plaque over the right ear pinna which had been present for past 4 months gradually ulcerated and progressed to form a fungating growth with foul smelling discharge since 1 month.

General examination was unremarkable. Systemic examination was normal. She was of Fitzpatrick skin type V. Dermatological examination revealed multiple, well defined, atrophic, alopecic, erythematosus to depigmented plaques with irregular hyperpigmented margins, covered with few areas of thick adherent scales, varying in size from 0.4-10 cm, distributed over the extensor aspect of both forearms, helix and concha of right ear, upper and lower back [Figures 1 & 2]. Carpet Tack sign was positive. A firm cauliflower-like growth measuring around 5x4 cm over right ear pinna with everted overhanging edges and foul smelling discharge was present [Figure 3]. The mass was friable, with bleeding on touch and fixed to the underlying tissue. Regional lymph nodes were not palpable. The surface of the tumor had scattered bleeding points, erosions and brown crusts. Oral and nasal mucosa, eyes, nails, palms, soles, external genitalia, perianal region and joints were normal. Routine hematological and biochemical investigations were normal. Chest radiography and ultrasound was normal. Antinuclear antibody was negative. The skin biopsy from a lesion over the forearm was performed and sent for histopathological examination which showed hyperkeratosis, follicular plugging, basal cell vacuolation, dermal perivascular lymphocytic infiltrate consistent with DLE [Figure 4]. Excisional biopsy of the fungating right ear lesion was done and sent for histopathological examination which showed features of well differentiated SCC, such as hyperkeratosis, papillomatosis, keratin pearls, and malignant cells invading dermis arranged in cords and sheets [Figure 5]. The patient was treated with oral hydroxychloroquine, topical

betamethasone dipropionate, and sunscreen agents for management of DLE while wide excision with skin grafting was done for SCC.

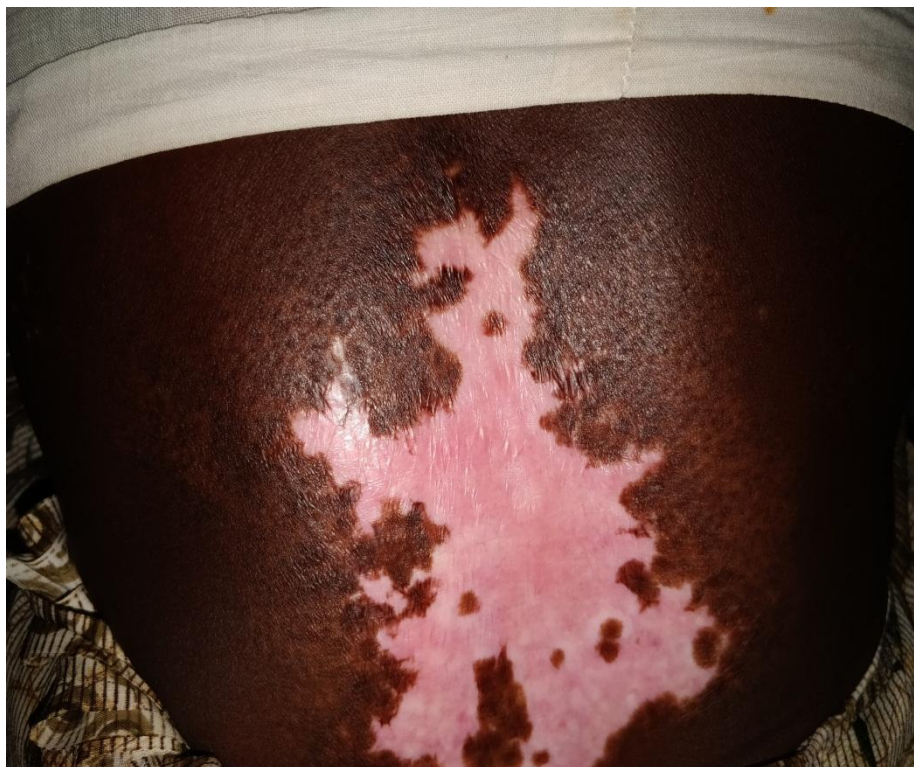


Figure 1: Erythematous atrophic depigmented plaque of DLE on lower back



Figure 2 : Multiple depigmented erythematous atrophic plaques of DLE on forearm



Figure 3 :Fungating growth on right ear arising on pre-existing plaque of DLE

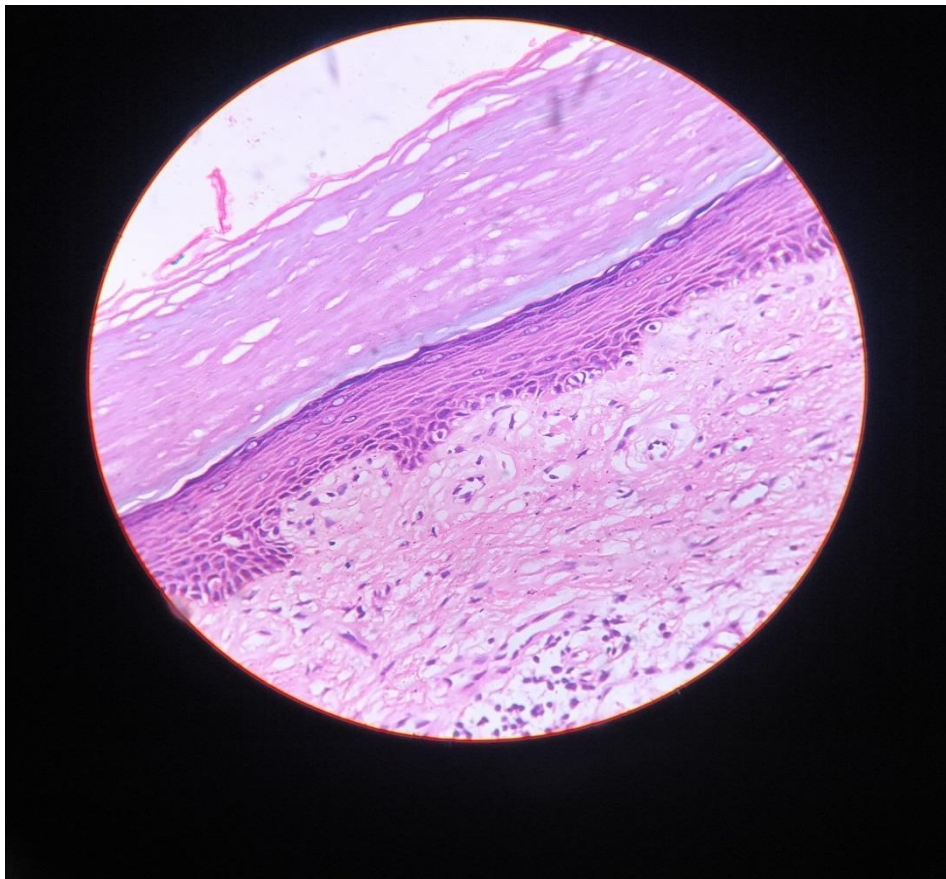


Figure 4 : Histopathology consistent with DLE(hyperkeratosis, follicular plugging, basal cell vacuolation, dermal perivascular lymphocytic infiltrate)

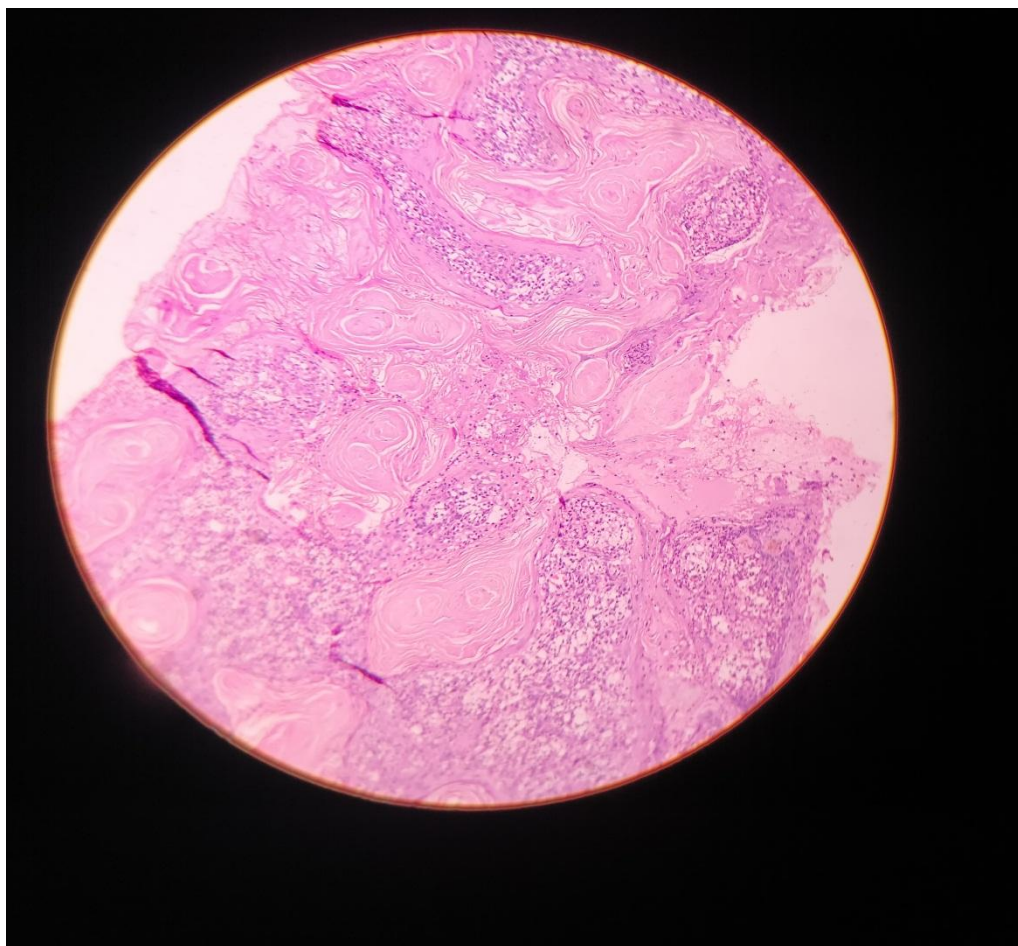


Figure 5 : Histopathology of right ear lesion showing well differentiated SCC (hyperkeratosis, papillomatosis, keratin pearls, and malignant cells invading dermis arranged in cords and sheets)

III. Discussion

DLE is a benign disorder, seldom associated with the development of SCC.^[2] Reports of SCCs arising in the lesions of DLE are limited from India. DLE is more common in females. Although SCC developing over DLE is more among males, our patient was a female. According to the studies, disseminated type of DLE developing SCC is more common compared to localized type of DLE^[3-5] similar to our study. Our study differs from Tao et al who found more patients of localized DLE developing SCC.^[6]

The most common site for SCC developing over DLE is sun exposed and heavily scarred areas of the face, scalp and forearm. The lips were the most commonly affected area in DLE related SCC.^[5,7] We are reporting a case of SCC arising from DLE lesion present on the pinna of external ear.

In a review by Sherman et al, the interval between development of DLE and SCC has varied from 4-20 years.^[8] However, there have been reports of shorter duration of up to four years between the onset of the disease and development of SCC, but our case developed SCC within a short period of four months from the appearance of DLE lesions which had remained undiagnosed and untreated. This could be explained by the high risk factors in this case. Precipitating factors for SCC in the present case were age more than 50 years, female sex, and continuous sun/ultraviolet ray exposure as the patient used to indulge in farming activities in the fields and her habit of picking the lesions had worsened the scarring. Thereby, these factors have contributed to early malignant transformation in the DLE lesion. High index of suspicion led us to biopsy the lesion and early carcinomatous changes were detected, thus preventing an aggressive malignancy. Thus, it is vital to look for malignant transformation in cases of DLE, especially in presence of risk factors like a photo-exposed area and chronic scarring, even if the plaque is of recent onset.

IV. Conclusion

Even though the incidence of malignant transformation of DLE lesions is rare, a high degree of suspicion for malignant changes is still necessary. These SCCs have been pragmatic to be more destructive than conventional SCCs. DLE patients with risk factors should be followed closely, and expert histopathologic evaluation of biopsy specimens from doubtful lesions is required to make an early, accurate diagnosis of SCC.

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