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Case Report

Erythroderma-as a paraneoplastic phenomenon of ovarian adenocarcinoma

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ABSTRACT

About 1% of erythroderma cases have a neoplastic or paraneoplastic etiology. But erythroderma secondary to adenocarcinoma of ovary has not yet been reported in the scientific literature to best of our knowledge. A 54-year-old female patient presented to OPD with complaints of reddish itchy scaly lesions over body since 2 months. Based on history and examination, contact dermatitis was considered as provisional diagnosis. Patient was started on prednisolone, cyclosporine and topical corticosteroids which led to partial improvement of the skin lesions. But the lesions recurred and involved almost entire body surface area after 15 days of stopping the medications by the patient. This instigated further evaluation of the patient. All routine lab investigations were within normal limits. Skin biopsy showed mixed inflammatory infiltrate. USG abdo-pelvis detected right ovarian mass. Serum CA 125 was found to be raised. This leads to the suspicion of internal malignancy. Staging laparotomy was done. Tissue biopsy revealed high grade serous papillary cyst adenocarcinoma of right ovary. Thus, final diagnosis of paraneoplastic erythroderma secondary to ovarian adenocarcinoma was made. Patient responded well to corticosteroids after total abdominal hysterosalphingo-oophorectomy and chemotherapy in due course of time of 4 months. Hence, we conclude, erythroderma patients with unclear etiologies should be thoroughly evaluated. This will lead to timely diagnosis and treatment leading to better prognosis.

Keywords: Adenocarcinoma, Erythroderma, Paraneoplastic

INTRODUCTION

Erythroderma refers to erythema and scaling involving >90% of the body surface area.[1] It is an inflammatory skin condition which can be primary or secondary. Primary erythroderma can occur due to drug intake, cutaneous T cell lymphoma, hematological malignancies, or solid organ malignancies. Secondary erythroderma occurs due to exacerbation of preexisting skin diseases like eczema, psoriasis, lichen planus etc. About 1% of erythroderma cases have a neoplastic or paraneoplastic etiology.[2] It is very important to diagnose the underlying causes of erythroderma as it determines the treatment and prognosis of the disease.

CASE REPORT

A 54 year old female patient presented to OPD with complaints of reddish itchy scaly lesions over body since 2 months. Patient had applied some topical medication for the same but got no relief. There was no history of drug intake or skin lesions prior to appearance of current rash. General and systemic examinations were normal. Local examination revealed diffuse erythematous patches with scaling over some part of trunk, back and extremities (Figure 1). Based on history and examination, contact dermatitis was considered as provisional diagnosis. Patient was started on prednisolone, cyclosporine and topical corticosteroids which led to partial improvement of the skin lesions. But the lesions

recurred and involved almost entire body surface area after 15 days of stopping the medication by the patient. This instigated further evaluation of the patient.

Figure 1: Erythematous patches with scaling.

All routine lab investigations were within normal limits. Skin biopsy showed mixed inflammatory infiltrate (Figure 2). USG abdo-pelvis detected right ovarian mass. Serum CA 125 was found to be raised. This leads to the suspicion of internal malignancy.

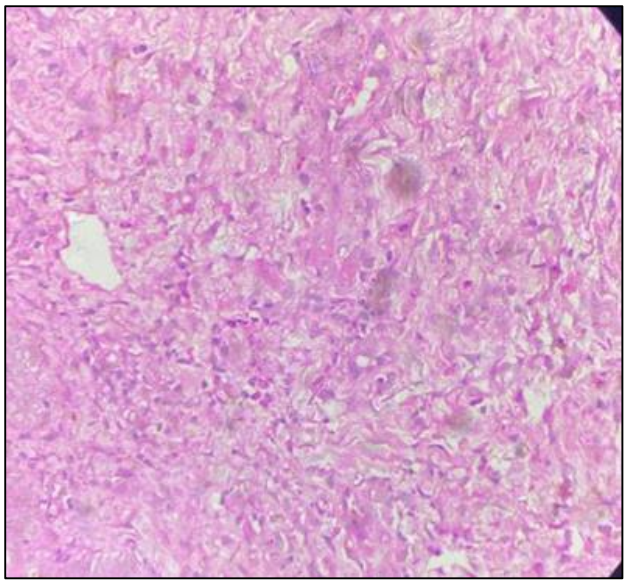

Figure 2: Dermis with mixed inflammatory infiltrate (Hematoxylin and eosin 40x).

Staging laparotomy was done. Tissue biopsy revealed high grade serous papillary cyst adenocarcinoma of right ovary (Figure 3).

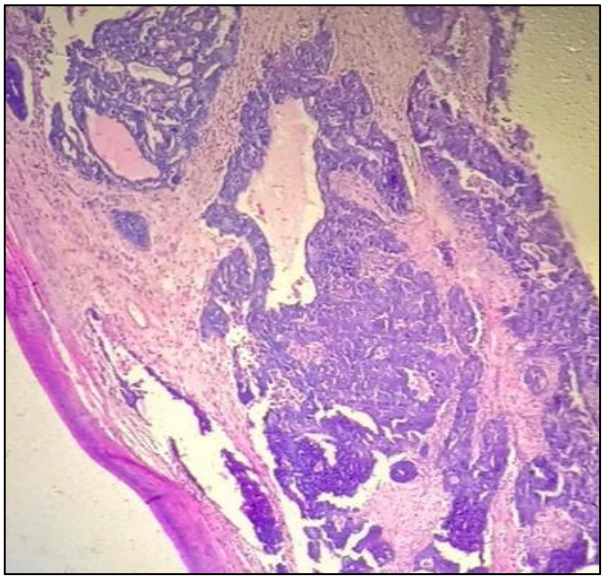

Figure 3: Ovarian cysts filled with serous fluid and tumor cells with papillary and glandular arrangement (Hematoxylin and eosin 10x).

Thus, final diagnosis of paraneoplastic erythroderma secondary to ovarian adenocarcinoma was made.

Patient responded well to corticosteroids after total abdominal hystero-salphingo-oophorectomy and chemotherapy in due course of time of 4 months.

DISCUSSION

Erythroderma usually presents in fifth and sixth decade of life. Even though most cases of erythroderma arise secondary to underlying dermatoses like psoriasis or eczema, 1-10% of patients may have underlying malignancy as a triggering factor.[3] Cases of cutaneous T cell lymphoma presenting as erythroderma have been reported.[4]

Cases of erythroderma secondary to solid organ malignancies like CA breast, CA thyroid, CA colon etc. are rare.[5] But erythroderma secondary to adenocarcinoma of ovary has not yet been reported in the scientific literature to best of our knowledge.

Paraneoplastic skin conditions have an association with internal malignancy but are not themselves malignant.[6]

At least one of the following criteria should be present to call it paraneoplastic dermatosis:[6] The malignancy and skin condition should occur concurrently, the two conditions should follow a parallel course, there should be a specific tumor site or cell type associated with the cutaneous condition, there should be a statistical association between the two conditions, there should be a genetic association between the two conditions. In this case, first two criteria were met.

Our patient had exfoliative dermatitis for 2 months without any signs and symptoms of underlying systemic disease. She did not have any preexisting skin lesion. There was lack of response to conventional treatment options. Histopathological findings were also non-conclusive of underlying cause. Hence, the suspicion of internal malignancy was considered.

Management of erythroderma is mainly supportive for e.g., maintenance of body temperature, proper hydration, correction of electrolyte imbalance and prevention of secondary infection.

Specific treatment depends upon the underlying cause.

In this case, patient responded well to treatment after resection of the ovarian malignancy.

CONCLUSION

Erythroderma patients with unclear etiologies should be thoroughly evaluated. This will lead to timely diagnosis and treatment leading to better prognosis.

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