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Dermatology Case Reports

Case Report

Nummular Eczema Associate with Augmented Mammoplasty

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ABSTRACT

Nummular eczema is coin-shaped lesions over of surfaces of the upper extremities. Majority of cases are young adult, etiology is multifactorial. Here, we present a case of 23-year-old woman developed nummular eczema after cosmetic mammoplasty over her surgical wound which is not have been reported before. In Our case lesions are getting worst after conservative treatment, finally we removed implants and continue with hydrocortisone cream 1% until lesions were subsided. Sections of right and left breast skin lesions reveal irregular epidermal hyperplasia with traces of spongiosis, exocytosis of inflammatory cells and focal orthokeratosis with mild parakeratosis.

Keywords: Nummular eczema; Augmented mammoplasty; Surgical wound

INTRODUCTION

Nummular eczema was first described by Marie Guillaume Alphonse Devergie [1,2] and classically presents in younger to middle-aged patients who report coin-shaped lesions over the extensor surfaces of the upper extremities. Majority of cases are young adult. The etiology of nummular eczema is multifactorial, involving environmental, allergic, emotional [3,4], and nutritional factors. It can occur in any season [5,6]. Yoshiko Iwahira et al. [7] firstly reported nummular eczema as a dermatologic complication after breast reconstruction.

CASE REPORT

The case was of a 23-year-old female. She underwent augmented mammoplasty with 365 round textured implants. No immediate post-operative complication in first 2 months until she came back with multiple groups of plaques like lesion around both areolar areas, around healed peri areolar that used as surgical incisions. Based on our patient's history and physical examination, she was treated with topical hydrocortisone cream 1% three times daily and antihistamines for her pruritis. After treatment her clinical getting worst, her lesion had serum oozing. We applied intravenous dexamethasone daily, after received lesions getting improve. However, after stopped lesions getting worst again. We decided to remove her both implants and send tissue from skin lesion and implant capsule for pathological report. After removed implant her wounds were treated with wet dressing until lesions dried and continue with hydrocortisone cream 1% over the next week the rash resolved, and she needed no further therapy (Figures 1-3).

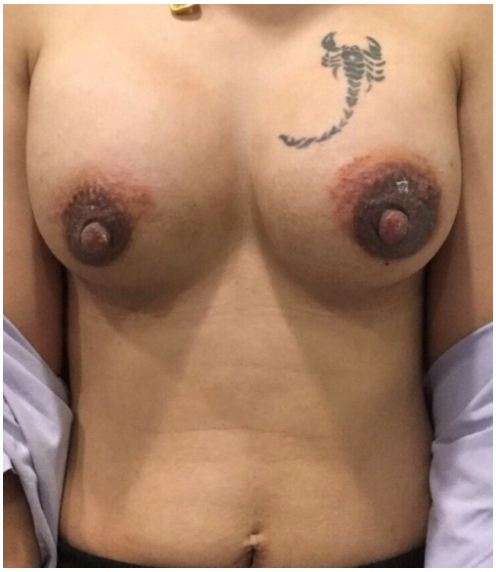

Figure 1: Months postoperative augmented mammoplasty, 1 week of nummular lesions.

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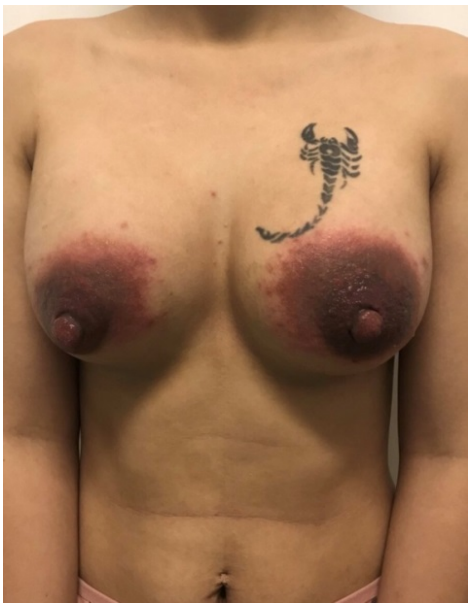

Figure 2: After conservative treatment, lesions were worst.

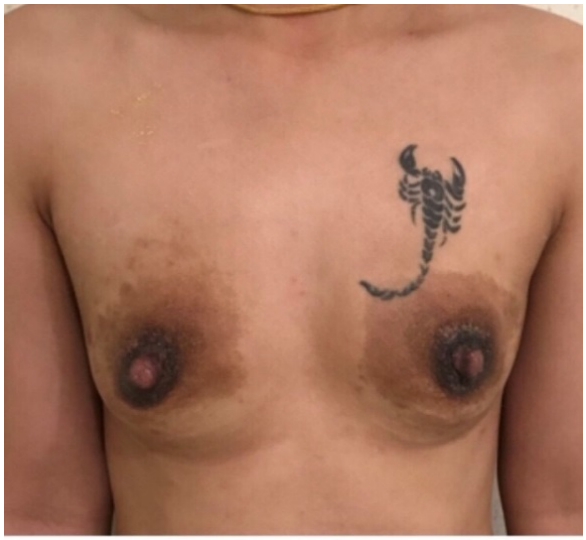

Figure 3: weeks after the removed implant.

Sections of right and left breast skin lesions reveal irregular epidermal hyperplasia with traces of spongiosis, exocytosis of inflammatory cells and focal orthokeratosis with mild parakeratosis [8] (Figure 4a). The dermis shows a moderately dense superficial perivascular lymphohistiocytic infiltrate and scattered eosinophils and neutrophils (Figure 4b). Fibroplasia is also identified in the dermal papillae as well as dilated superficial blood vessels. Trichrome staining shows randomly aligned hypertrophy of collagen fibers in the reticular dermis (Figure 4c). Sections of right and left breast implant capsules also show fibrosis in between the preserved mammary lobular architecture (Figure 4d). Furthermore, minimal lymphocytic infiltrate in the mammary lobules are also observed.

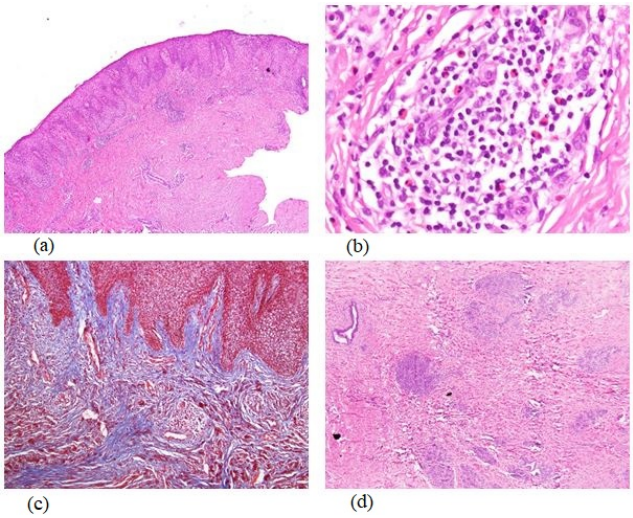

Figure 4: Histology (a): histologic section of breast skin shows epidermal acanthosis with psoriasiform pattern and minimal parakeratosis with mild spongiosis; (b): Superficial perivascular lymphohistiocytic infiltrate with occasional eosinophils and neutrophils in the dermis; (c): Increased dermal fibrosis highlighted by trichome stain; (d): Breast implant capsule with intact lobular architecture and increased fibrosis.

DISCUSSION AND CONCLUSION

Nummular eczema is skin lesions that most frequently develops in the upper and lower extremities, as well as on the trunk, dorsum of the hand, face, and neck. The etiological cause remains unclear, and it is recognized as a multifactorial involving environmental, allergic, emotional, and nutritional factors. In addition, dry skin, weather, infection, and alcohol also can induce nummular eczema. Since we have known about nummular eczema from first report in mid 1800s, no report that associate with implant especially in breast implants. Yoshiko Iwahira et al. [7] reported in 2015 about series of nummular eczema in breast reconstruction patients. They reported 2.89% of 1662 patients developed nummular eczema. However, there is no report in English literature in cosmetic augmented mammoplasty case, which we all know it is very famous procedure in plastic procedure. We think that most of plastic surgeon who expert in augmented mammoplasty may have experience in this condition, but sometimes it occurs in the late post-operative period and lesion may small to made patient did not come to follow up with their surgeon or they choose to consult with dermatologist instead of coming to see plastic surgeon.

In our experience we have seen some nummular eczema in post augmented mammoplasty, most of them occurred after 6 months after the operation and in a majority of cases, conditions healed within three to four weeks with the administration of steroid ointments. In this case lesions were developed within 2 month which is too early than normal, and clinical was uncontrolled with steroid ointments and partially responded with intravenous dexamethasone. We made a co-decision with her to removed implant. Her surgical wound was well completely healed, no surgical wound dehiscence. Because

of lesions developed both sides, we send tissue from both surgical scar and implant capsule for histology.

Histologic findings of nummular eczema are not specific and correlation with clinical appearance is required. The appearances vary with the chronicity and activity of the lesion. In early lesions there is epidermal spongiosis and sometimes spongiotic vesiculation associated with some acanthosis and exocytosis of inflammatory cells, including lymphocytes and occasional neutrophils. The spongiotic vesicles sometimes contain inflammatory cells, simulating Pautrier microabscesses. There is progressive psoriasiform epidermal hyperplasia, but this is not always as uniform as in allergic contact dermatitis, which otherwise closely mimics nummular dermatitis. Scale crust often forms above this thickened epidermis. There is a superficial perivascular infiltrate in the dermis composed of lymphocytes, some eosinophils, and occasional neutrophils and plasma cells. Nummular dermatitis often has an 'untidy appearance' microscopically.

We hypothesized that in our case nummular eczema was induced by two reasons First, operative maneuvers damage the skin, when the surgical approach is conducted via a short incision, the incision margin is compressed with retractors to expose the operative field for insert implant caused damaging the skin at the margin of the incision. Second, the blood supply to the breast skin is reduced as a result of implant placing caused pressure effect, especially in large or oversize implant. In addition, when blood supply is impaired due to expansion of skin, ischemia deteriorates function of sebaceous glands, making skin difficult to retain its moisture. This hyperactive stage may have chance to developed nummular eczema. We aim to report a complicated nummular eczema case which is not responded to conservative treatment.

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