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CASE REPORT

INTRA-ARTICULAR GLUCOCORTICOSTERIOD (HYDROCORTISONE HEMISUCCINATE) INDUCED ACNE – A RARE CASE REPORT

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ABSTRACT:

Acne is a chronic inflammatory disease of the pilosebaceous unit, characterized by the formation of comedones, erythematous papules and pustules, less frequently nodules or cysts, and in some cases scarring[1].**S**teroid acne is an acneoform eruption induced by steroids use. Steroid acne is relatively common dermatological problem, causing great cosmetic disfigurement[2]. The precise mechanism of glucocorticosteroids to provoke an acneoform reaction is uncertain. Glucocorticosteroids do not affect the number of surface bacteria, but do induce cornification in the upper part of the pilosebaceous duct. So hypercornification is responsible for steroid acne[3]. Intra-articular glucocorticosteriods are used in management of Osteoarthritis, Rheumatoid Arthritis, Juvenile Idiopathic Arthritis & Synovitis. Typically, Acne occurs with therapy using intravenous, oral, topical and inhaled glucocorticosteroids. In this article, we describe a patient with tarsometatarsal joint synovitis who was treated with intra-articular steroid injection and presented with steroid induced multiple acnes on the chest and the face after 10th day. Acne developing following intra-articular glucocorticosteroid injection has been never reported in the literature. Hence we would like to present here a rare case of intra-articular glucocorticosteriod injection induced acne in a 40 years aged female.

Keywords: Acne, Corticosteriods, Steriod Acne.

INTRODUCTION

40 years old female presented to clinic one year ago with severe pain and swelling in left dorsum of foot for about 2 months. She had no other medical history related to drug adverse reactions. She was diagnosed with tarsometatarsal joint synovitis and put on local steroid (hydrocortisone hemisuccinate 100mg/2ml given intra-articular injection every week for 3 weeks. On the first day, one dose of intra-articular glucocorticosteroid (hydrocortisone hemisuccinate) injection has been administered. Patient was told to report after one week for second dose. As patient felt relief from the first dose, she reported after one week for the second dose. Second injection was administered as previously done. After 48 hours of intra-articular injection, patient noticed multiple acnes on her chest and the face. Patient consulted the doctor about this acnes and doctor reassured it is not adverse drug reaction of glucocorticosteroid. Third injection was administered after one week. Suddenly, patient felt discomfort. On examination she had new multiple, erythematous, acnes on her chest and the face and previously presented acnes aggravated and she had severe pain. After the course of the treatment, severity of acne decreased gradually and took three months to complete recovery.

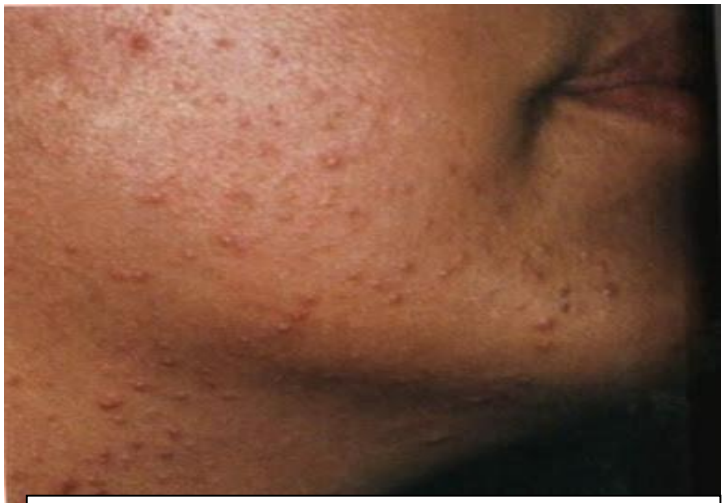

Figure 1 : Steriod acne on face and neck of patient

DISCUSSION

Chronic synovitis is a common problem in people affected with autoimmune or crystal induced diseases. Current therapies are effective but a significant number of patients are still resistant to this treatment and are at risk of developing acnes and long term joint destruction[4].

Intra-articular injection: A joint injection (intra-articular injection) is a local procedure used in the treatment of inflammatory joint conditions, such as rheumatoid arthritis, psoriatic arthritis, gout, osteoarthritis or idiopathic synovitis. Its role is to increase the efficacy of administered substances by reducing systemic exposure to drugs, off-target effects and by enhancing bioavailability and the delivery of molecules that would be incompatible with systemic delivery[4].

Hydrocortisone was introduced for intra-articular injection in 1951. Since then, vast experience has confirmed the value of this agent and of other glucocorticosteroid suspensions for combating pain and inflammation when injected into the joint in patients with rheumatoid arthritis and other inflammatory conditions[5]. However, their use as intra-articular injection forms has been controversial. Early studies in mice, rats and rabbits suggested that multiple corticosteroid injections might alter cartilage protein synthesis and consequently damage the cartilage[5].

They cause mainly local side effects like flaring of pain, subcutaneous atropy, skin pigmentation. Systemic side effects are facial flushing, menstrual irregularities, syncope. Acne is common side effect following oral, parental and topical use of glucocorticosteroid. One case of inhaled glucocorticosteroid induced acne has been reported[5]. No case of intra-articular glucocorticosteroid induced acne has been reported. Hence we are reporting a rear case of Intra articular glucocorticosteriod induced acne in a 40 years old female.
Steroid acne (steroid induced acne) is an acneiform eruption, with papules and pustules that occurs in people who have used corticosteroids over several weeks. Histological examination of a steroid induced lesion showed follicular plugging and dilatation of the hair follicle resulting in an epithelial cyst with a large collection of mononuclear cells and few eosinophil[5].

The first event in steroid acne is rupture of the follicle. Normal sebaceous follicle really has no horny layer, the horny cells slough almost as soon as they formed, filled the lumen with loose scales. Glucocorticosteroids can therefore contact the viable epithelium in high concentrations; than glucocorticosteroids can produce atrophy and even death of epidermal cells. Necrosis of a segment of epithelium enables follicular contents, notably sebum, to seep into the dermis, calling forth an exudation of pus cells. The emigration of neutrophils and the release of tissue-damaging enzymes are both partially counteracted. Suppuration is not prominent in steroid acne, nor is there ever enough tissue destruction to cause scarring[6].

Favorable reports on the use of intra-articular steroids in osteoarthritis are numerous. Hollander reported on 30 years of experience with a large number of injections[7]. In a 10-year follow-up of the first 100 patients who had been given repeated intra-articular steroid injections in osteoarthritic knees, 59 patients no longer needed injections, 24 continued to require occasional injections, and only 11 did not obtain a worthwhile response[8].

CONCLUSION

From above study, we are concluding that all form of glucocorticosteroid therapy i.e, IV, Oral, Topical, Inhalation and Intra-articular may produce acne as side effect. So one has to look for acne whenever intra-articular glucocorticosteroid is administered.

REFERENCES

1. Simpson NB & Cunliffe WJ: Disorders of the Sebaceous Glands. In: Burns T, Breathnach S,Cox N &.Griffiths C: Textbook of Dermatology. Vol. 3, 7th ed. Oxford, Blackwell Science Ltd, 2004: 43.60-1.
2. Habif TP. Clinical Dermatology. A color guide to diagnosis and therapy. 4th ed., Pennsylvania: Mosby, Inc, 2004: 191.
3. Factors Influencing the Occurrence of Steroid acne Salam Abdul Kareem Al-Temimi Hadaf Abed Al-Ameer Iraqi J. Comm. Med. April. 2006 (3)265-267.

4. Weitoft T, Ronnelid J, Knight A, Lysholm J, Saxne T, Larsson A. Outcome predictors of intra-articular glucocorticoid treatment for knee synovitis in patients with rheumatoid arthritis – a prospective cohort study. Arthritis Res Ther. 2014 Jun 20;16(3):R129
5. David H. Neustadt. Intra-articular injections for osteoarthritis of the knee. Cleveland Clinic Journal Of Medicine 2006; 73(10) 897-911.
6. Kaidbey.K H, Kligmen A M. The pathogenesis of topical steroid acne. The Journal of Investigative Dermatology 1974;62:31-36.
7. Hollander JL. Intrasynovial corticosteroid therapy in arthritis. Md State Med J 1970; 19:62–66.
8. Hollander JL. Osteoarthritis: perspectives on treatment. Postgrad Med 1980; 68:161–164, 167–168.