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Blistering Skin Rash Attributed to Risankizumab: A Case Report

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Abstract

Biologic agents like Risankizumab are being used more frequently over the recent years and are generally considered safe. Joint pains, gastrointestinal and respiratory symptoms are some of the common side effects but a blistering skin rash is rare and limited data is available in the literature. Withdrawing the medication and topical steroids are usually sufficient for resolution of symptoms and occasionally oral steroids can be required for severe cutaneous reactions. We are reporting a case of a blistering skin rash in a patient treated with Risankizumab in the setting of significant sun exposure.

Keywords: *Risankizumab, Blistering skin rash, Cutaneous reactions, Photosensitivity rash.*

Introduction

Recent advances in the understanding of pathophysiology of psoriasis has led to development of highly efficacious and safe targeted therapies [1]. Biological drugs specifically binding interleukin (IL) -17 and IL-23, and their receptors were developed as a result [2,3].

Risankizumab, is an immunoglobulin modulator that is approved for treatment of moderate-to-severe psoriasis along with Guselkumab and Tildrakizumab [1].

Risankizumab is a fully human immunoglobulin (Ig)G monoclonal antibody that inhibit the release of proinflammatory cytokines and chemokines by binding to the P19 subunit of the interleukin (IL)- 23 [1]. Commonly reported side effects include upper respiratory infections, headache, joint pains, abdominal pain, injection site reaction, anemia, fever, back pain and urinary tract infection, but skin problems are a rare with Risankizumab.

Here we present a case of blistering rash we believed to be associated with Risankizumab.

Case Description

A 57-year-old male who was known to have gastroesophageal reflux disease, hyperlipidemia, and psoriasis, reported a blistering rash on his back. He was established with a dermatologist for psoriasis vulgaris with involvement of 5-10% of body surface area, and was being treated with Risankizumab for the last two years. Monitoring was done with biannual complete blood counts (CBC) and comprehensive metabolic panel (CMP). Laboratory workup was normal and he tolerated treatment without any complications.

He was on vacation for a few a week and spent significant time on the beach out in the sun. The rash started as erythematous spots and soon developed into large blisters, with erythema, despite the use of regular sunblock (image 1).

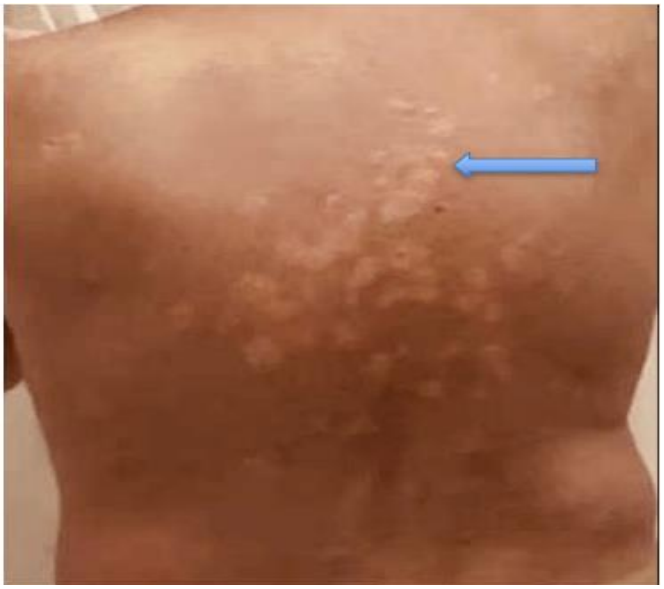

Image 1: Rash on the back, and blisters forming near the right scapula shown by the blue arrow.

Patient contacted dermatology clinic and was advised to use protective layering like hats, protective clothing, continued sunblock use and reduce/avoid further sun exposure until rash improves. Rash improved over the next two weeks without any further intervention and without needing to discontinue Risankizumab. No identifiable trigger was noticed on detailed history such as new exposures, medications, skin products or infection etc. Routine laboratory work-up including CBC and CMP, and inflammatory markers i.e., C-reactive protein and erythrocyte sedimentation rate were completely normal. No further workup was done as the rash was showing signs of healing. The rash was thought to be associated with the use of Risankizumab, in the setting of significant sun exposure (photosensitivity).

Discussion

Biologic agents used in the treatment of moderate to severe psoriasis are generally considered to be safe and effective [4]. Various skin reactions have been reported secondary to these newer drugs. Eczematous drug eruptions account for almost 10% of skin drug reactions, including biologic agents, antivirals and cancer drugs [6]. Blistering rash (bullous drug reaction) are not so common with biologic agents and there are only few reports in the literature. A recent study reported 8 reports of drug-induced bullous pemphigoid (DBP) in patients receiving anti-tumor necrosis factor-α (TNF-α) and 6 reports in patients receiving IL 12/23 inhibitors. There were only 2 reported cases of DBP associated with IL-23 inhibitor with only 1 attributed to Risankizumab [7]. Kromer et al reported 2 cases of eczematous eruptions attributed to Risankizumab [8]. A recent systemic analysis reported one case of papular rash, 5 case of contact dermatitis but none with eczematous eruptions or heat rash associated with Risankizumab [9].

The pathogenesis of cutaneous adverse reactions associated with biologics e.g., eczematous eruptions or bullous pemphigoid is poorly understood and attributed to imbalance of the immune system [8,10].

Medication withdrawal and rechallenge is the considered gold standard for most of cutaneous drug reactions, but might not be a feasible option [11]. The cause should be investigated if the diagnosis is not clear or symptoms persist or worsen. Topical emollients and/or corticosteroids is the most common treatment opted for by the clinicians, and oral prednisone is tried in cases where topical treatment fails or the symptoms are severe. Oral antihistamines and chlorhexidine baths can used for relief of symptoms like pruritis, and oral antibiotics are used for bacterial superinfection [6]. Phototoxicity is mediated by ultraviolet (UV) light and responds to avoidance of UV light or withdrawal of the medication [12].

Patient education and preventative strategies can play a key role in managing patients' treatment with biologic agents. Our patient had complete resolution of symptoms and received detailed counseling and education on preventive measures to adopt in the future.

Conclusion

Cutaneous drug reaction should be considered in patients receiving Risankizumab. Patient education and early intervention can play a vital role in preventing and/or treating the rash. It is recommended to reducing sun exposure, use protective layering, and using sunblock while a patient is on Risankizumab.

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Sana Chaudhary: Primary Author. Data collection and contribution to literature.

Rabia Malik: Contributed to introduction and case description.

Lal Muhammad: Contributed to discussion, review and editing.

Nazish Najeeb: Contributed to discussion, review and editing.

Syed Ali Mehdi: Contributed to discussion, review and editing.

Yasir Ahmed: Supervised the entire process, from conception to finalizing the draft. Literature search, referencing, and review and editing and final draft for publication.

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