

Case Report

A Case Report: Red Skin Syndrome- as the Rebound Effect of Using a Long Term Potent Topical Corticosteroid

Cristine D. Octaviani

Departement of Pharmacology and Clinical Pharmacy
Faculty of Pharmacy, Universitas Padjadjaran, Sumedang, Indonesia

Abstract

31 years old male suffered from a rare skin disorder, diagnosed of red skin syndrome. Seven years ago, symptoms was begun with a light itching on skin area of body as well as face, and visited a general practitioner, diagnosed of light allergic rhinitis. He was prescribed oral corticosteroid, methyl prednisolone 4 mg b.i.d and very potent topical corticosteroid, clobetasol. The symptoms was significantly disappeared and being rebound after stopping the prescription. To maintain this rebound effect, for seven years in on-off unhealed conditions, he used topical cream corticosteroid, clobetasol, that fully masked this worst rebound condition. When application of the topical cream was stopped, rebound effect relapsed and even red skin syndrome became worse than before. After 20 months of being fully stopped from corticosteroid, the symptoms finally slowly reduced. He almost fully recovered and had a normal life until now December 2013. By this case, we can learn that this red skin syndrome, resulted from side effect of corticosteroid, will be stopped by fully stopping administering orally or topically, and this will take quite long time for skin to recover.

Key words: Corticosteroid, rebound, red skin syndrome

Studi Kasus: Red Skin Syndrome sebagai Efek Penggunaan Kortikosteroid Topikal dalam Waktu Lama

Abstrak

Seorang lelaki berumur 31 tahun menderita gangguan kulit yang didiagnosis sebagai *red skin syndrome*. Sekitar tujuh tahun yang lalu, gejalanya diawali dengan gatal ringan pada daerah kulit tubuh dan wajah, serta sempat datang berobat ke dokter umum dan didiagnosis sebagai rinitis alergi ringan. Pasien diresepkan kortikosteroid oral *methyl prednisolone*, 4 mg b.i.d dan krim clobetasol. Dengan pemberian ini dalam waktu tiga hari gejalanya langsung hilang namun kembali muncul ketika pemakaian obat dihentikan, tanpa *tapering off*. Dalam menjaga keadaan kulitnya, selama kurang lebih tujuh tahun dengan keadaan hilang-kambuh, pasien menggunakan pengganti kortikosteroid oral, yaitu krim topikal kortikosteroid clobetasol yang kemudian dapat menutupi kondisi *on-off rebound* tersebut. Ketika penggunaan krim topikalnya dihentikan, efek *rebound* kembali muncul bahkan dengan kondisi yang lebih buruk. Setelah berhenti total 20 bulan dari penggunaan terakhirnya, perlahan gejalanya mereda. Keadaan pasien membaik hingga bulan Desember 2013. *Red skin syndrome* sebagai efek samping dari pemberian topikal kortikosteroid baik oral maupun topikal pada kasus ini dapat dihentikan total dengan cara menghentikan seluruh pemberian obat dan menunggu waktu cukup lama hingga kulit kembali pulih.

Kata kunci: Kortikosteroid, *rebound effect*, *red skin syndrome*

Correspondence: Cristine Dwi Octaviani, S.Farm., Apt. Departement Pharmacology and Clinical Pharmacy, Faculty of Pharmacy, Universitas Padjadjaran, Sumedang, Indonesia, email: cristine_octaviani@yahoo.com

Introduction

The administration of corticosteroid is widely used in many treatments of skin disorders. Many patients still like using topical administration without proper guidance from doctors or pharmacist and think topical one is safer. The objective of this case presentation is to show case that topical administration in a long term administration can also resulted in red skin syndrome and rebound effect if tapering dose off does not well done.

Case Presentation

A man- 31 years old, suffered from a rare skin disorder, diagnosed of red skin syndrome, resulted from corticosteroid administration of an intermediate potent-oral corticosteroid of methyl prednisolone 4 mg b.i.d and a very potent topical cream clobetasol. Beginning with first 2 weeks administration, the symptoms significantly disappeared and being rebound after stopping the prescription a month after. Since this rebound effect has widely known when stopping corticosteroid administration without good guidance of tapering off.

Many times seeing many doctors with no significant result, this man moved to Chinese herb treatment that at the end known of containing corticosteroid as well, resulted in moon face since it was a one-year oral administered. This could happen due to lack of knowledge of him to consume Chinese herb that was badly contained corticosteroid since the effect of moon face happened to him. After being shocked for this effect the patient stopped this administration, and resulted in worst rebound effect for a year. This might be a very high dose and potent steroid contained in the herb. To make a follow up, the patient went to doctor again to get follow-up for this rebound effect and repeatedly he was given an oral corticosteroid,

methyl prednisolone, and clobetasol as the topical one. But for this time, the patient has been updated with many journals and being guided by a pharmacist, that's why he was reformed that corticosteroid could suppress the adrenal gland so that better information he got. But in order to solve this corticosteroid administration, the treating doctor finally decided to stop using the oral administration by tapering the dose off until no more usage of oral one, replace to use only the topical one.

In 2007, finally he could stop using the oral one. But, he kept on treating the rest syndrome of red skin and itchy skin by using topical corticosteroid still using clobetasol. The doctor also had opinion that topical is safer than the oral one in making worse side effect of rebound and about the availability in blood. Due to feeling never recovered, he tried to look up many journals and medical information also asked for second opinion from other doctors and pharmacists, finally got information that corticosteroid only suppressed the symptom, just like giving a mask effect, and resulted in rebound if we stop it so that the patient will keep on using it continuously.

After getting knowledge from quite many literatures about corticosteroid and recommendation from the treating doctor and pharmacist in November 2011, he made up his mind to fully stopped using this topical one. But for months after stopping, the skin area got worse. The patient finally used supportive care such as collagen, vaseline, and moisturizers to keep the skin being fully moist and soft. After 20 months being fully stopped from the drug, in concomitant with on-off unhealed conditions, the symptoms finally reduced slowly, he recovered. Until October 2013, he almost recovered fully and had a normal life.

Discussion

Corticosteroid is one of chemical compound

that includes steroid hormones naturally produced in the adrenal cortex of vertebrates and analogues of these hormones that are synthesized in laboratories. Corticosteroids

are involved in a wide range of physiological processes, including stress response, immune response, and regulation of inflammation, carbohydrate metabolism, protein catabolism,

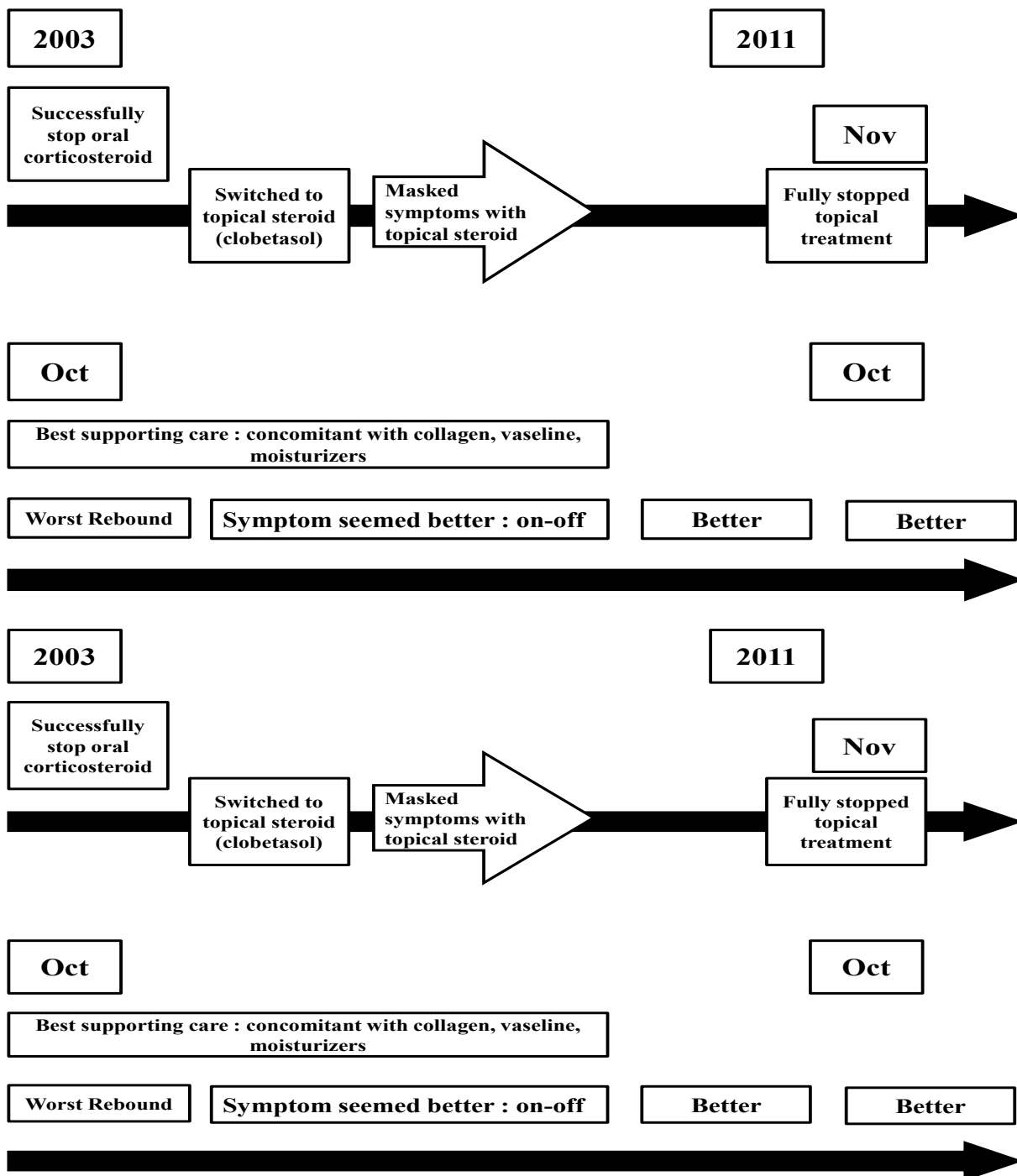


Figure Patient Tracking Data Scheme

blood electrolyte levels, and behavior. Corticosteroids are mainly used to relieve inflammation. Inflammation occurs when the immune system (the body's natural defence against infection and illness) causes part of the body to become swollen, red and filled with fluid in response to an infection. Inflammation is helpful in preventing the spread of infection. However, in some health conditions the immune system triggers inflammation even though no infection is present.¹

Topical therapy used by corticosteroid remains a key component of the management of almost all skin-disorder patients and while mild disease is commonly treated only with topical agents, the use of topical therapy as adjuvant therapy in moderate-to-severe disease may also be helpful.²

The term "Red Skin Syndrome" was coined by Dr. Marvin Rapaport MD, an American dermatologist who has worked with many patients suffering from eczema and found that overuse of topical steroid creams can cause nasty side effects when withdrawn. Common symptoms include weeping, burning skin when a steroid cream is discontinued. In many cases, overuse of potent steroid creams causes the skin to enter a cycle of addiction, with doctors prescribing more potent steroids to treat the worsening skin condition. Steroid creams are an effective short term treatment for dermatitis, but prolonged use over a large body area can quickly spiral out of control. The more potent the cream, the more extreme the symptoms upon cessation it could be.³ From this case we know that this patient after getting oral administration, the patient got moon face and when stop its administration even though with tapering off, also reported therebound effect. We could learn that the only way to be cured from this red skin syndrome is by stopping it fully, the oral as well as the topical ones and make it a steady waiting-time for an uncertain recovery days, and let the skin

recovered by itself. As reported as well from some discussions and other cases reports.⁴⁻⁹

The concomitant and best supporting care could be given to maintain the red and wounded skin and make the skin become moist all days which recommended by the treating doctor and pharmacist. In addition, told us in skin management of that epithelialization would proceed twice as fast in a moist environment than under a scab.¹⁰ Cell growth needs moisture and the principle aim of moist wound therapy is to create and maintain optimal moist conditions. Cells can grow, divide and migrate at an increased rate to optimize the formation of new tissue. During this phase of wound healing an aqueous medium with several nutrients and vitamins is essential for cell metabolism and growth.

The wound exudate serves as a transport medium for a variety of bioactive molecules such as enzymes, growth factors and hormones. The different cells in the wound area communicate with each other via these mediators, making sure that the healing processes proceed in a coordinated manner.¹⁰ Patient tracking data on his progress day by day was reported in scheme.¹

Conclusion

Tapering dose off is a usual manner of managing oral corticosteroid administration. Patients should keep tapering dose off until they recover well. When topical cream is used to maintain patient's quality of life, especially with long term administration, without improper administration and no tapering off as well, it could result in red skin syndrome and rebound effect. Since many patients still consider topical is safer than oral. By this case showed that topical corticosteroid also can result steroid addiction and to solve it is by stop using it and some concomitant best supporting care treatments can help a bit improvement.

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