

ALLERGIC CONTACT DERMATITIS TO TERRAMYCIN AFTER REDUCTION MAMMOPLASTY

Esra ADIŞEN, Meltem ÖNDER

ABSTRACT

Topical antibiotics, frequently used in daily practice, are one of the most common causes of allergic contact dermatitis. Herein, we report a case of contact dermatitis to Terramycin® ointment after mammoplasty. Allergic contact dermatitis to a topical antibiotic should be considered in any patient who has developed a dermatitis after surgery. Topical use of antibiotics should be restricted to real indications and avoided in immediate postoperative wound care. One of the main potential risks for the contact sensitization of the topical antibiotics is the occurrence allergic cross-reactions. This could prevent the use of some oral antibiotics for the treatment of future infections in these patients.

Key Words: Allergic Contact Dermatitis, Postoperative Wound Care, Topical Antibiotics, Terramycin.

MEME KÜÇÜLTME OPERASYONUNDAN SONRA GELİŞEN TERRAMİSİN ALLERJİK KONTAKT DERMATİTİ

ÖZ
Günlük pratikte çok sık olarak kullanılan topikal antibiyotikler allerjik kontakt dermatitlerin en sık sebeplerinden biridirler. Biz burada mammoplastiden sonra Terramisin merheme kontakt dermatit geliştiren bir olguyu sunmaktayız. Cerrahi işlemlerden sonra dermatit geliştiren kişilerde topikal antibiyotiklerin allerjik kontakt dermatitleri düşünülmelidir. Cerrahiden sonra topikal antibiyotiklerin kullanımı gerçek endikasyonlarıyla sınırlanmalı ve erken dönemde postoperatif yara bakımında kullanımlarından kaçınılmalıdır. Topikal antibiyotiklere kontakt duyarlanmanın en önemli risklerinden biri allerjik çapraz reaksiyon oluşumudur. Allerjik çapraz reaksiyon oluşumu, bu hastalarda gelecekte oluşabilecek enfeksiyonların tedavisinde bazı oral antibiyotiklerin kullanımını da önleyecektir.

Anahtar Kelimeler: Allerjik Kontakt Dermatit, Postoperatif Yara Bakımı, Topikal Antibiyotikler, Terramisin.

INTRODUCTION

Topical antibiotics are one of the most common causes of allergic contact dermatitis (ACD) and are frequently used in daily practice. They are also widely used in operating rooms to soak implants, irrigate compound fractures, and apply to surgical incisions. Sometimes they are used solely for lubrication of the suture material.^{1,2} ACD is a delayed type of hypersensitivity reaction resulting from contact with a specific allergen to which the patient has developed a specific sensitivity. Topical antibiotic use during and immediately after the surgical surgery may cause sensitization to these agents. Thus, these people will possess a risk of developing contact dermatitis to further uses of these antibiotics. Therefore, the contact sensitization potential of topical antibiotics not only threatens the development of eczematous skin reactions, but also complicates the postoperative wound healing process. This issue is important especially for surgical procedures performed for cosmetic purposes.^{1,4} Herein, we report such a patient that experienced allergic contact dermatitis to Terramycin® after reduction mammoplasty.

CASE REPORT

A 29-year-old woman underwent reduction mammoplasty followed by prophylactic application of Terramycin® ointment containing 30 mg oxytetracycline, 10,000 units of polymyxin B sulfa-



Figure 1: Allergic contact dermatitis to Terramycin® ointment along the sutures.

te, white petrolatum, and liquid petrolatum (Pfizer Pharmaceuticals, Istanbul, Turkey). After the surgery, she developed a reaction in the areas where she applied the Terramycin® (Fig. 1). A dermatological examination revealed mild erythema, crusting, and exudation in the periaerolar area. The patient did not describe an allergic reaction to any other topical or systemic antibiotics. A diagnosis of ACD was made. Patch tests were performed with European Standard Series, the patient's own products, and with Terramycin®. The patient showed (+++) reaction to Terramycin® ointment on day 3. There were no reactions to the other allergens tested. The lesions were treated with fluticasone propionate cream applied twice daily for 10 days.

DISCUSSION

Terramycin® has activity against gram-positive and gram-negative bacteria, rickettsiae, spirochetes, large viruses, and certain protozoa. Polymyxin B Sulfate, one of a group of related antibiotics derived from *Bacillus polymyxa*, is rapidly bactericidal. It is a widely used antibiotic with clinically proven efficacy. In contrast to a previous study that found oxytetracycline to have a high sensitizing capacity¹, other studies listed both oxytetracycline and polymyxin among very weak sensitizers². In addition, ACD due to solely oxytetracycline⁴ or polymyxin B⁴ has been rarely reported in the literature, which further shows that their sensitization potential are low. Since Terramycin® is inexpensive and has broad-spectrum antibacterial activity, it is one of the most preferred topical antibiotics among surgeons for surgical and traumatic wounds in Turkey. In Turkey, Terramycin® containing preparations are available and are among over-the-counter drugs (OTC), and a risk for an increased potential of exposure is present.

Many authors do not recommend the use of topical antibiotics because of the risk of the development of resistance and possibility of hypersensitivity reactions.^{1-3,5} There has been a trend towards using petrolatum instead of topical antibiotics for prevention of infections in clean skin surgery.⁶ Topical antibiotics are also used for lubrication of suture material, which was the source of the first antibiotic contact in our patient. Thus, eczematous lesions were present along the sutures. A controlled study in ambulatory surgery patients has already shown that petrolatum has an equally low infection rate as bacitracin and minimal risk for induction of allergy.⁷ This is an important issue since one of the main potential risks for the contact sensitization of the topical antibiotics is the occurrence of allergic cross-reactions that could prevent the use of some oral antibiotics for the treatment of future infections.

ACD to a topical antibiotic should be considered in any patient who has developed an ACD after surgery. Because of the frequency of ACD, topical use of antibiotics should be restricted to real indications and avoided in immediate postoperative wound care.

Correspondence Address

Esra ADIŞEN

Gazi University Faculty of Medicine Department of Dermatology
06500 Beşevler, Ankara TURKEY

Phone: 0 312 202 61 29

Fax: 0 312 212 90 18

E-mail: eozsoy@gazi.edu.tr

REFERENCES

1. Goh CL. Contact sensitivity to topical antimicrobials (II). Sensitizing potentials of some topical antimicrobials. *Contact Dermatitis* 1989; 21: 166-171.
2. Smeenk G, Sebens FW, Houwing RH. Use and adverse reactions of local antibiotics and disinfectants on the skin. *Ned Tijdschr Geneesk* 1999; 143(22): 1140-1143.
3. Bajaj AK, Gupta SC. Contact hypersensitivity to topical antibacterial agents. *Int J Dermatol* 1986; 25(2): 103-105.
4. Bojs G, Moller H. Eczematous contact allergy to oxytetracycline with cross-sensitivity to other tetracyclines. *Berufsdermatosen* 1974; 22(5): 202-208.
5. Lakin JD, Strong DM, Sell KW. Polymyxin B reactions, IgE antibody, and T-cell deficiency. Immunochemical studies in a patient after bone marrow transplantation. *Ann Intern Med* 1975; 83(2): 204-207.
6. Smack DP, Harrington AC, Dunn C, et al. Infection and allergy incidence in ambulatory surgery patients using white petrolatum vs bacitracin ointment. A randomized controlled trial. *JAMA* 1996; 276(12): 972-977.
7. James WD. Use of antibiotic-containing ointment versus plain petrolatum during and after clean cutaneous surgery. *J Am Acad Dermatol* 2006; 55: 915-916.