‘POST SURGICAL WOUND SITE POVIDONE IODINE CONTACT DERMATITIS: A CASE REPORT.”

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ABSTRACT

Povidone iodine is one of the most common and first choice antiseptics used for preparing the patient for surgery and also for post-operative wound cleaning and dressing. A underdiagnosed and under reported adverse drug effect encountered is allergy induced by the antiseptic. Here is a case report of such an uncommon dermatitis occurring post operatively. Diagnosis was based on clinical sign and symptoms, history of exposure. Naranjo’s causality assessment was done and a probable relation was established.

KEYWORDS: Povidone Iodine, Contact Dermatitis, Causality Assessment.

INTRODUCTION

Povidone iodine (PI), derived from polyvinylpyrrolidone iodine, is an antiseptic widely used in surgery. Current guidelines advocate the use of wound antiseptics when infections are localized and have not spread systemically. Local treatment with antiseptics is expected to become even more prominent in future wound management strategies, since antiseptics have broad spectrums of antimicrobial activity, and are available in convenient and well-tolerated formulations.[1] Contact dermatitis due to PI has considered very uncommon common particularly in view of such widespread use.[2] Literature show many published reports of allergy and chemical burns by PI but it seems to be underreported in Indian patients as compared to its incidence.[3, 4] We report a post operative surgical case which showed sign and symptoms of PI allergy as soon as the wound was opened for restocking on the next day of surgery.
CASE REPORT
A 61 year old male was posted for elective umbilical hernia along with circumcision for secondary phimosis. Surgery was uneventful and the patient was discharged with the prescription containing oral cefpodoxime, diclofenac serratiopeptidase combination and a povidone iodine solution for local cleaning and dressing in the native village of patient. Patient reverted back by the next day complaining of redness, itching, irritation and pain of skin over both umbilical and penile surgical wounds areas. History of local wound cleaning with povidone iodine was documented. The Dermatological opinion labelled it as a case of contact allergic dermatitis which had spread to a margins of 2 to 3 Centimeter based on exposure history and site. Past history of any allergy was not present. Immediately the iodine solution was withdrawn and at both the wound sites dermatitis started resolving thereafter after managing it with a local antibiotic ointment. Complete recovery of dermatitis occurred in 3 days post withdrawal. Naranjo’s causality assessment was done and the score was 5 suggesting a Probable causal relation between the two. [5]

DISCUSSION
PI 10% possesses several of the desirable antiseptic characteristics such as broadest spectrum of antimicrobial activity, rapidity of action, persistent effect, and as such, is a first-choice antiseptic for the prevention and treatment of superficial skin infections. In the case of povidone iodine, diiodine is released gradually from a neutral polymer base (polyvinylpyrrolidone), and subsequent microbial membrane penetration of free iodine and intracytoplasmic protein oxidation cannot be stopped. Thus, povidone iodine has a particularly broad spectrum of antimicrobial activity. [6] In surgeries it is one of the most common antiseptic used and for wound cleaning also. This type of allergy is one of the most uncommon type and usually surgeons don’t enquire for any history of iodine allergy. Injury to the skin attributable to PI has been reported both as mild with only erythema and as severe with tissue necrosis. [7] The treatment for acute contact dermatitis, whether allergic or irritant, includes removal of the source; expression of pustules; irrigation with a drying, desquamating soap; and use of topical and systemic steroids as well as systemic antihistamines. [8] Case series studies have also suggested that humidity and occlusion are necessary for contact dermatitis to Betadine to develop after surgical interventions. This therefore leaves a doubts, this reaction is due to a dermatitis that is both irritant and allergic. [9] Hence its recommended to educate the care taking staff to allow drying of the solution before dressing to prevent
humidity and a differential diagnosis must be kept in mind for this uncommon occurrence and a minor enquiry about past history can lead to a better outcome of surgery.

REFERENCES