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Genital Contact Allergy

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SUMMARY Irritant and allergic contact dermatitis is commonly seen in patients complaining of itching, burning and irritation in the genital area. The aim of this retrospective study was to establish the prevalence of allergic contact dermatitis patients with genital complaints. We followed 33 patients with persistent or recurrent genital redness, itching and burning sensation. Diagnosis was made by history, clinical examination and patch testing. Patch tests were carried out according to the International Contact Dermatitis Research Group with a standard series of allergens. We also tested topical pharmaceutical products that individual patients used for treating genital symptoms and patients self intimate hygiene products. There were 11 male and 22 female patients, mean age 38 years. Thirteen (39%) patients had one or more positive allergic reactions, mainly to nickel-sulfate, thimerosal, balsam of Peru, formaldehyde and neomycin sulfate. In seven of 13 patients with positive patch test results, these reactions were considered to be relevant to their clinical condition. Three patients had positive patch test reactions to their intimate hygiene products. One patient had positive patch test reaction to latex condom. Patients with genital symptoms are at a risk of developing contact sensitivity. Patch testing is useful in the management of these patients and many can be helped by allergen avoidance.

KEY WORDS: allergic contact dermatitis, vulva, penis

INTRODUCTION

Irritant and allergic contact dermatitis is commonly seen in patients complaining of itching, burning and redness in the genital area (1). Dermatoses seen in the genital area are often confused with infection (especially fungal infection) and the correct diagnosis and treatment are delayed for months (1). Irritants may cause more intense reaction as the result of higher transepidermal water loss, capacitance and blood flow in the genital area (2). Genital hypersensitivity reactions may be subdivided into those related to sexual activity (kissing, foreplay, coitus) and those that may occur in the absence of sexual contact, i.e. due to active agents in topical medication and popular remedies, preservatives and ointment bases as the most common cause of allergic reaction (Table 1).

The aim of this retrospective study was to establish the prevalence of allergic contact dermatitis among patients with genital complaints. All tested patients had symptoms for many years prior to referral to our Department and they frequently reported long-term usage of local self-medication.

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2009;17(4):285-288

Table 1. The most common irritants and allergens in genital area

Allergens	Irritants
Preservatives	Shower gels, soaps (cleansers)
Local anesthetics (benzocaine, lidocaine)	Deodorants/hygiene sprays
Neomycin	Sweat, urine, feces
Latex condoms	Testosterone cream
Balsam of Peru	Creams (alcohol)
Lanoline	Medicaments (TCA, 5-FU, podophyllin,
Perfume	podophyllotoxin, acyclovir)
Nail polish	Spermicides and condoms
Chlorhexidine	Menstrual and incontinence pads, tampons
Copper intrauterine device	Garments

PATIENTS AND METHODS

We investigated 33 patients with persistent or recurrent genital redness, edema, itching and burning sensation (Figs. 1 and 2). Diagnoses were established by disease history, clinical picture and patch testing to a standard series of allergens, corticosteroids (tixocortol pivalate and budesonide), pharmaceutical over-the-counter (OTC) products used by patients to treat genital symptoms, and personal intimate hygiene products. The allergens for patch testing were obtained from the Zagreb Immunological Institute (Zagreb, Croatia). Pharmaceutical OTC products used by individual patients to treat genital symptoms and personal intimate hygiene products were patch tested when necessary (in 30 of 33 patients), according to patient history data. Patch tests were performed using Finn Chambers tape left on the skin of the back for 2 days. The patch tests were read on days 2 and 3. Reactions were scored as recommended by the International Contact Dermatitis Research Group (ICDRG).

Figure 1. Allergic contact dermatitis to fragrance mix and thimerosal.

RESULTS

There were 11 male and 22 female patients, mean age 38 years. Thirteen (39%) patients had one or more positive allergic reactions (Table 2), mainly to nickel sulfate, followed by thimerosal, fragrance mix, neomycin sulfate, balsam of Peru, formaldehyde and neomycin sulfate. Three patients had positive patch test reactions to their intimate hygiene products (Fig. 2). One patient each had positive patch test reaction to latex and budesonide.

Figure 2. Contact allergic dermatitis to intimate hygiene product.

Acta Dermatovenerol Croat
2009;17(4):285-288

Table 2. Results of patch test reactions to standard series of allergens

Standard series of allergens			Reaction	
			Positive	Negative
1	Potassium dichromate	0.5% pet.	0	0
2	Cobalt chloride	1.0% pet.	1	0
3	Nickel sulfate	5.0% pet.	6	0
4	Formaldehyde	1.0% H_2O	2	2
5	Paraphenylenediamine	0.5% pet.	0	0
6	Balsam of Peru	25.0% pet.	3	2
7	Epoxy resin	1.0% pet.	0	0
8	Colophony	20.0% pet.	0	0
9	Mercury precipitate	10.0% pet.	0	0
10	Benzocaine	5.0% pet.	0	0
11	Carba mix	3.0% pet.	0	0
12	Mercapto mix	2.0% pet.	0	0
13	Black rubber mix	0.6% pet.	0	0
14	Fragrance mix	8.0% pet.	3	3
15	Thiuram mix	1.0% pet.	0	0
16	Wood tars	12.0% pet.	0	0
17	Paraben mix	15.0% pet.	0	0
18	Neomycin sulfate	20.0% pet.	2	2
19	Quaternium-15	1.0% pet.	0	0
20	Thimerosal	0.1% pet.	4	2
21	Tixocortol pivalate	0.1% pet.	0	0
22	Budesonide	0.1% eth.	1	0
	Total		22	11

DISCUSSION

Allergic contact dermatitis was considered to be responsible for the condition and symptoms in 39% of study patients tested due to anogenital complaints. The reactions were considered relevant if the patient had contact with the substance at the respective site and if the symptoms improved upon substance avoidance (3). Out of 22 positive patch test reactions to the standard series of allergens, 11 reactions were considered relevant to the patient clinical condition (Table 2). In our study, nickel sensitivity was the most common allergy detected (6 of 13 positive patients), but these reactions were not considered relevant, since none of the patients reported a history of nickel anogenital contact. The relevance of nickel in genital dermatoses has been debated, and it is unclear whether direct transfer of nickel by hands or exposure to nickel at remote sites may be the cause of genital dermatitis (1). It is also doubtful whether nickel found in food and nickel-containing recycled toilet paper could be considered a cause of sensitization in the genital area (1). Three patients each had reactions to fragrance mix and balsam of Peru. The major source of fragrances can be found in toilet paper, personal toiletries, wet intimate tissues, daily and menstrual pads, and also in some topical treatments. Sensitization probably develops due to excessive use of these products. Both patients allergic to neomycin sulfate reported a history of contact with this allergen in topical preparation, which worsened their symptoms (excessive redness with burning and itching sensation upon cream application). They both tested positive to both neomycin sulfate in the standard series of allergens and the local cream they had used.

Thirty patients were tested for a variety of personal medicaments and personal hygiene products, which they thought to have possibly exacerbated their symptoms. Only three of them showed positive reaction on patch test, which was found relevant.

In only one patient we found latex allergy. According to the patient's history, he had worsening of genital symptom (redness) every time after sexual intercourse. Both type I and type IV hypersensitivity reactions have been reported to latex condoms (4,5). Most commonly seen are contact dermatitis, contact urticaria, and more rarely ana-

Acta Dermatovenerol Croat
2009;17(4):285-288

phylaxis. Sensitization to topical corticosteroids did not play a major role in our patients (only one positive patch test reaction to budesonide), but should be considered in cases with the lack of responsiveness or worsening of symptoms when local steroids are applied (6).

CONCLUSION

Genital allergy is uncommon in general population but should be considered in all patients with genital pruritus, redness, soreness, or burning sensation. These patients experience chronic conditions that have unfavorable impact on most aspects of their life. Patch testing is a useful investigative tool for those at risk, as knowledge of their sensitivity frequently improves their symptoms. Recommended series are standard series, patient's own topical medicaments, personal hygiene products and other suspected products. Once the allergen has been identified, avoidance is optimal approach to allergy management.

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Nivea Cream for nice hands in spite work at home; year 1934.
(From the collection of Mr. Zlatko Puntijar)