

**Original article:**

## **Study to Find the Prevalence of Contact Dermatitis in a Tertiary Care Centre at Kanpur**

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### **ABSTRACT**

**Background:** Contact dermatitis is defined as the superficial inflammatory reaction of the skin induced by exogenous chemicals interacting on the skin. The present study was conducted to find the prevalence of contact dermatitis in a tertiary care centre.

**Materials and Methods:** The present cross-sectional study was done among 410 patients over a period of 6 months. Cases of contact dermatitis were diagnosed by detailed history, relevant clinical examination and through their correlation as well as by excluding other forms of eczema by the absence of their characteristic history and clinical features. The recorded data was compiled, and data analysis was done using SPSS Version 20.0 (SPSS Inc., Chicago, Illinois, USA).

**Results:** In the present study a total 410 patients were included in which 58.53% were males and 41.46% were females. Contact dermatitis was present in 11.95% patients.

**Conclusion:** The present study concluded that prevalence of contact dermatitis was 11.95%.

**Key words:** Contact Dermatitis, Allergic Sensitization, Urticaria.

### **INTRODUCTION**

Skin is exposed to a spectrum of chemical and biological products leading to a steady rise in the incidence of allergic sensitization. Many adverse reactions such as hyperpigmentation, hypopigmentation, acne, urticaria, atrophy, phototoxic reactions, and eczema occur when skin comes in contact with external agents. Irritant contact dermatitis accounts for approximately 80% of all contact dermatitis while allergic contact dermatitis (ACD) accounts for the remaining 20%.<sup>1</sup> Allergic diseases are manifested as hyper responsiveness in the target organ, whether skin, nose, lung, or gastrointestinal tract.<sup>2</sup> Occupational related CD represents 90% of all occupation related skin disorders and results in over four million lost work days per year.<sup>3,4</sup> ACD was considered as a disorder of the adult population and children were thought to be spared due to a lack of exposure to potential allergens and an immature immune system. Prevalence of ACD to even the most common allergens in children, like poison ivy and parthenium, is relatively rare as compared to adults.<sup>5</sup> In industrialized countries, contact dermatitis is one of the common occupational diseases and has a great socioeconomic impact. An estimated 15%–20% of the general population suffers from contact allergy.<sup>6</sup> The present study was conducted to find the prevalence of contact dermatitis in a tertiary care centre.

## MATERIALS AND METHODS

The present cross-sectional study was done among 410 patients over a period of 6 months. Before the commencement of the study ethical approval was taken from the Ethical Committee of the institute and written consent was taken from the patient after explaining the study. All the patients coming to dermatology outpatient department (OPD) having lesions clinically suggestive of contact dermatitis, those who were willing to participate were included in the study. Non-cooperative individuals, seriously ill persons were excluded from the study. Cases of contact dermatitis were diagnosed by detailed history, relevant clinical examination and through their correlation as well as by excluding other forms of eczema by the absence of their characteristic history and clinical features. The recorded data was compiled, and data analysis was done using SPSS Version 20.0 (SPSS Inc., Chicago, Illinois, USA).

## RESULTS

In the present study a total 410 patients were included in which 58.53% were males and 41.46% were females. Contact dermatitis was present in 11.95% patients.

**Table 1: Distribution according to gender**

Gender	N(%)
Male	240(58.53%)
Females	170(41.46%)
Total	410(100%)

**Table 2: Prevalence of contact dermatitis**

Presence of contact dermatitis	N(%)
Present	49(11.95%)
Absent	361(88.04%)
Total	410(100%)

## DISCUSSION

ACD occurs when an allergen comes into contact with the previously sensitized skin due to cell-mediated hypersensitivity or immunity.<sup>7</sup>

Skin inflammation can also be induced by irritant chemicals such as detergents like sodium dodecyl sulfate (SDS).

This is due in part to a damaging effect on the skin barrier. Therefore, a combination of irritants and contact allergens as often found in cosmetics, household products, and workplace materials can facilitate sensitization due to the amplification of skin inflammation resulting in, for example, the augmentation of DC activation.<sup>8</sup>

An Indian study showed that the proportion of footwear dermatitis was 24.22% among a total of 640 patients.<sup>9</sup>

ACD develops in only a small proportion of sensitized individuals varying from 1.7% to 6%.<sup>10,11</sup>

Rao et al. concluded that environment, overcrowding, poor living conditions, and poor hygiene were found to be the major factors of skin diseases and correction of these conditions shall significantly reduce the occurrence of dermatoses.<sup>12</sup>

A study done in Chandigarh also had identified potassium dichromate as the commonest allergen.<sup>13</sup> High prevalence of sensitivity to potassium dichromate is probably explained by the current construction boom in this part of the world. Parthenium was the commonest sensitizer recognized in studies conducted in Delhi and Pune.<sup>1,14</sup>

## CONCLUSION

The present study concluded that prevalence of contact dermatitis was 11.95%.

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