

ABSTRAK
**ANGKA KEJADIAN DERMATITIS KONTAK AKIBAT KERJA PADA
PETUGAS KEBERSIHAN SERTA PROFIL ALERGEN PENYEBAB
(studi uji tempel terhadap alergen *Benzalkonium chloride* 0.5%, *Sodium
hipoclorite* 1%, *Formaldehde* 1%, *Mercaptobenzothiazole* 2%, dan
Tetramethylthiuram disulfide 1% di RSUP Dr Kariadi Semarang)**

Aldian Indirawaty¹, Diah Adriani Malik², Holy Ametati³

¹Bagian/KSM Dermatologi Venereologi dan Estetika Fakultas Kedokteran
Universitas Diponegoro/ RSUP Dr. Kariadi

Latar Belakang : Dermatitis kontak akibat kerja (DKAK) adalah penyakit kulit yang disebabkan oleh kontak dengan bahan alergen dan iritan dalam berbagai profesi, termasuk petugas kebersihan. Petugas kebersihan berisiko terpapar bahan alergen dan iritan dari cairan pembersih dan alat pelindung diri (APD), namun penelitian mengenai populasi ini masih terbatas.

Tujuan : Mengetahui angka kejadian DKAK pada petugas kebersihan serta mengetahui profil alergen penyebab di RSUP Dr Kariadi Semarang.

Metode : Penelitian observasional analitik dengan rancangan potong lintang melibatkan 30 petugas kebersihan. Data dikumpulkan melalui wawancara menggunakan kriteria Mathias dan *Nordic Occupational Skin Questionnaire* (NOSQ) 2002, pemeriksaan fisik, serta uji tempel dengan alergen yang terkandung dalam cairan pembersih dan APD. Uji tempel dilakukan di punggung atas dan dibaca pada 48, 72, 96, serta 168 jam (*delayed reaction*) menurut *International Contact Dermatitis Research Group* (ICDRG).

Hasil : Berdasarkan kriteria Mathias, ditemukan 12 subjek dengan DKAK (4 perempuan dan 8 laki-laki). Hasil uji tempel positif ditemukan pada 7 subjek (23,4%) dengan alergen utama *Benzalkonium chloride* 0,5%, *Sodium hipoklorit* 1%, dan *Mercaptobenzothiazole* 2%. Analisis bivariat menunjukkan hubungan bermakna antara lama masa kerja ($p=0,010$) dan riwayat dermatitis atopik ($p=0,009$) dengan kejadian DKAK, namun analisis multivariat tidak menemukan pengaruh signifikan kedua faktor tersebut terhadap kejadian DKAK.

Kesimpulan : Kandungan *Benzalkonium chloride* 0.5%, *Sodium hipoclorite* 1% dan *Mercaptobenzothiazole* 2% berperan sebagai alergen penyebab DKAK pada petugas kebersihan. Penelitian ini menegaskan pentingnya identifikasi alergen untuk pencegahan DKAK.

Kata Kunci : dermatitis kontak akibat kerja, uji tempel, *benzalkonium chloride* 0.5%, *sodium hipoclorite* 1%, *mercaptobenzothiazole* 2%, petugas kebersihan

ABSTRACT
THE INCIDENCE OF OCCUPATIONAL CONTACT DERMATITIS
AMONG CLEANING STAFF AND THE PROFILE OF CAUSATIVE
ALLERGENS

(A Patch Test Study on Allergens: Benzalkonium Chloride 0.5%, Sodium Hypochlorite 1%, Formaldehyde 1%, Mercaptobenzothiazole 2%, and Tetramethylthiuram Disulfide 1% at Dr. Kariadi General Hospital, Semarang)

Aldian Indirawaty¹, Diah Adriani Malik², Holy Ametati³

¹Department/Division of Dermatology, Venereology and Aesthetic Medicine, Faculty of Medicine, Diponegoro University / Dr. Kariadi General Hospital

Background: Occupational contact dermatitis (OCD) is a skin disease caused by contact with allergens and irritants in various professions, including cleaning staff. Cleaning staff is at risk of exposure to allergens and irritants from cleaning agents and personal protective equipment (PPE); however, research on this population remains limited.

Objective: To determine the incidence of OCD among cleaning staff and to identify the allergen profiles causing the condition at Dr. Kariadi General Hospital, Semarang.

Methods: This was an analytical observational study with a cross-sectional design involving 30 cleaning staff. Data was collected through interviews using the Mathias criteria and the Nordic Occupational Skin Questionnaire (NOSQ) 2002, physical examinations, and patch testing with allergens found in cleaning agents and PPE. Patch testing was performed on the upper back and read at 48, 72, 96, and 168 hours (for delayed reactions) according to the International Contact Dermatitis Research Group (ICDRG) guidelines.

Results: Based on the Mathias criteria, 12 subjects were identified with OCD (4 females and 8 males). Positive patch test results were found in 7 subjects (23.4%) with the main allergens being Benzalkonium chloride 0.5%, Sodium hypochlorite 1%, and Mercaptobenzothiazole 2%. Bivariate analysis showed a significant association between length of employment ($p=0.010$) and a history of atopic dermatitis ($p=0.009$) with the occurrence of OCD; however, multivariate analysis did not find these factors to have a significant influence on the incidence of OCD.

Conclusion: Benzalkonium chloride 0.5%, Sodium hypochlorite 1%, and Mercaptobenzothiazole 2% was identified as causative allergens of OCD in cleaning staff. This study highlights the importance of allergen identification in effort to prevent occupational contact dermatitis.

Keywords: occupational contact dermatitis, patch test, benzalkonium chloride 0.5%, sodium hypochlorite 1%, mercaptobenzothiazole 2%, cleaning staff.