

Dermatitis pada Tangan Tenaga Nonmedis dan Derajat Keparahannya: Kajian Penggunaan Hand Sanitizer terhadap Transepidermal Water Loss (TEWL) dan Skin Capacitance = Hand Eczema and Its Severity in Nonmedical Personnel: A Study of The Use of Hand Sanitizer on Transepidermal Water Loss (TEWL) and Skin Capacitance

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Abstrak

Peningkatan frekuensi penggunaan hand sanitizer dan mencuci tangan dengan sabun disinyalir menyebabkan peningkatan insidens dermatitis pada tangan. Tenaga nonmedis yang bekerja di rumah sakit juga mengimplementasikan hand hygiene secara rutin sehingga ikut mengalami peningkatan kejadian dermatitis pada tangan. Penelitian ini bertujuan menganalisis dermatitis pada tangan tenaga nonmedis, derajat keparahannya, serta penggunaan hand sanitizer terhadap transepidermal water loss (TEWL) dan skin capacitance. Penelitian observasional dengan desain potong lintang ini dilakukan pada bulan Juli hingga September 2022 di ruang penelitian kelompok staf medis (KSM) Dermatologi dan Venereologi, RSUPN Dr. Cipto Mangunkusumo (RSCM), Jakarta. Subjek dipilih berdasarkan kriteria penelitian dengan metode cluster random sampling. Identitas, data penggunaan hand sanitizer dan mencuci tangan, stigmata atopi, dan durasi dermatitis pada tangan didapatkan melalui anamnesis. Penilaian keparahan dermatitis pada tangan dilakukan dengan hand eczema severity index (HECSI). Pemeriksaan TEWL dan skin capacitance dilakukan dengan Tewameter® TM 300 dan Corneometer® CM 825. Analisis data dilakukan dengan Statistical Package for the Social Sciences (SPSS) versi 21.0. Terdapat masing-masing 24 subjek yang direkrut pada kelompok dengan dan tanpa dermatitis pada tangan. Berdasarkan karakteristik sosiodemografik dan klinis, tidak ada perbedaan bermakna antara kedua kelompok kecuali frekuensi mencuci tangan dengan air dan sabun. Subjek dengan dermatitis lebih sering mencuci tangan dengan air dan sabun dibandingkan dengan subjek tanpa dermatitis (6 vs 4,5 kali/hari; $p = 0,005$). Proporsi kejadian dermatitis pada tangan pada tenaga nonmedis pengguna hand sanitizer adalah 10% dengan median durasi penyakit 22 minggu dan rerata nilai HECSI $9,25 \pm 6,33$. Tidak terdapat perbedaan TEWL dan skin capacitance yang bermakna kedua kelompok ($p > 0,05$). Tidak terdapat korelasi yang bermakna antara TEWL dan skin capacitance dengan skor HECSI ($p > 0,05$). Mayoritas tenaga nonmedis yang mengalami dermatitis pada tangan memiliki derajat keparahan ringan. Kerusakan sawar kulit kemungkinan sudah terjadi akibat peningkatan praktik hand hygiene walaupun belum tampak gejala secara klinis sehingga tidak terdapat perbedaan fungsi sawar dan hidrasi kulit yang bermakna antara kelompok dermatitis dan kelompok tanpa dermatitis.

.....Increased frequency of hand sanitizer use and washing hands with soap allegedly caused the increasing incidence of hand eczema (HE). Nonmedical personnel who work in the hospital also implement hand hygiene practices routinely so they also experience increased incidence of HE. This study aims to analyze the HE in nonmedical personnel, its severity, and the effect of hand sanitizer use on transepidermal water loss (TEWL) and skin capacitance. This observational cross-sectional study was conducted from July to September 2022 at the Department of Dermatology and Venerology, Dr. Cipto Mangunkusumo National Central General Hospital, Jakarta. Subjects were recruited based on the study criteria with cluster random sampling method. Subject's identity, data related to hand sanitizer use and hand washing, atopic stigmata,

and duration of HE were documented through history taking. The severity of HE was assessed with hand eczema severity index (HECSI). TEWL and skin capacitance were measured with Tewameter® TM 300 and Corneometer® CM 825. Data were analyzed with Statistical Package for the Social Sciences (SPSS) version 21.0. Both HE and control groups consisted of twenty-four subjects, respectively. Based on sociodemographic and clinical characteristics, there was no significant difference between both groups, except for the frequency of hand washing. Subjects with HE washed hands more frequently compared to normal subjects (6 vs 4.5 times/day; $p = 0.005$). The proportion of HE incidence in nonmedical personnel using hand sanitizer was 10% with median duration of disease of 22 weeks and mean HECSI score of 9.25 ± 6.33 . There was no significant difference of TEWL and skin capacitance between both groups ($p > 0.05$). There was no significant correlation between TEWL and skin capacitance with HECSI scores ($p > 0.05$). Majority of nonmedical personnel suffering from HE had mild severity. The disruption of skin barrier might have already occurred due to increased of hand hygiene practice although clinical symptoms had not become visible, leading to no significant difference of barrier function and skin hydration in both groups.