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Analiza skrbi stomatološkog osoblja i studenata o svojoj koži

Analysis of Dental Professionals' and Dental Students' Care for their Skin

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Sažetak
Cilj: Željela se ustanoviti učestalost i lokalizacija nepoželjnih kožnih promjena povezanih s radom stomatološkog osoblja i studenata, te prikupiti podatke o dijagnostičkim postupcima i mjerama zaštite kože koje poduzimaju kada se one pojave. **Ispitanici i metode:** Naše istraživanje obuhvatilo je 444 ispitanika (stomatologa, dentalnih asistenata, zubnih tehničara, studenata stomatologije) koji su ispunili upitnik. Od svih je zatraženo da navedu jesu li uočili promjene na koži i gdje, jesu li se pritom podvrgnuli terapijskim postupcima i kojima, jesu li se alergološki testirali, te jesu li poduzimali ikakve zaštitne mjere. **Rezultati:** Od svih ispitanika koji su sudjelovali u istraživanju, 249 (56,1 %) primijetilo je nepoželjne reakcije na koži šaka i prstiju (96 %). Prije našeg ispitivanja samo je njih 15 % posjetilo dermatovenerologa, a 33 % podvrgnulo se alergološkim testovima (bez kliničkog pregleda kod dermatovenerologa). Oko 45 % ispitanika katkad se koristi sapunima za osjetljivu kožu, a većina (61 %) primjenjuje zaštitne kreme za ruke te ih upotrebljava jedan do dva puta na dan. **Zaključak:** Iako je velik broj stomatološkog osoblja i studenata primijetio kožne promjene povezane s poslom, samo su neki zatražili stručnu pomoć dermatovenerologa, a većina nije poduzela odgovarajuće zaštitne mjere kod njihove pojave. Zato je potrebno poduzeti dodatne mjere kako bi se kod svih njih povećala svijest o profesionalnim dermatozama i odgovarajućoj njezi kože.

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Ključne riječi
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Uvod

Poznato je da se stomatološkom osoblju (stomatolozima, dentalnim asistentima, zubnim tehničarima) i studenima stomatologije najčešće pojavljuju kožne promjene povezane s radom, što može potaknuti nastanak profesionalnih kožnih bolesti koje se, nakon poremećaja mišićno-koštanog sustava, nalaze na drugom mjestu po učestalosti među profesionalnim bolestima u ovom zanimanju (1, 2, 3). U većini slučajeva kožne promjene povezane s radom očituju se kao kontaktne reakcije (npr., irititativni kontaktni dermatitis, alergijski kontaktni dermatitis, kontaktna urtikarija) obično na šakama, ali i na drugim dijelovima tijela (npr., na podlakticama, licu i vratu) (4, 5). Kontaktne reakcije na koži mogu se klinički različito manifestirati te uključuju svrbež, eritem, papulovezikule, raspukline, hiperkeratoze i lihenifikacije, te urtikarijalnu reakciju (2, 3). Kod osoba s kontaktnim dermatitisom doticaj kože s iritatansima i/ili alergenima može potaknuti nastanak nealergijskog (iritativnog ili toksičnog) ili alergijskog kontaktnog dermatitisa (2, 6, 7). Iritativni kontaktni dermatitis češći je i povezan je s oštećenjem kožne barijere zbog trenja i različitih čimbenika u okolišu/zanimanju (npr., hladnoća, stomatološki materijali, rukavice, prekomjerna ili

Introduction

Work-related skin lesions are known to commonly occur in dental professionals (dentists, dental assistants, dental technicians) and dental students, possibly leading to occupational skin diseases which rank second among occupational diseases in this profession, following musculoskeletal disorders (1,2,3). In most cases, work-related skin lesions are manifested as contact reactions (e.g. irritant contact dermatitis, allergic contact dermatitis, contact urticaria), commonly on hands but also on other body parts (e.g. forearms, face and neck) (4,5). Skin contact reactions may be characterized by different clinical features including itching, erythema, papulovesicles, fissuring, hyperkeratosis and lichenification but also as urticarial lesions (2,3). In contact dermatitis a patients' skin is in contact with irritants and/or allergens, which can lead to non-allergic (irritant or toxic) or allergic contact dermatitis (2, 6, 7). Irritant contact dermatitis is more common and is related to skin barrier damage due to friction and various environmental/occupational factors (i.e. cold, dental materials, gloves, excessive or prolonged exposure to water or chemicals such as acids, alkali, detergents, cleaning agents, disinfectants, solvents, lubricants, dust etc.) (2,4,8). In pa-

produljena izloženost vodi ili kemikalijama kao što su kiseline, lužine, deterdženti, sredstva za čišćenje, dezinficijensi, otapala, maziva, prašina itd.) (2, 4, 8). Kod osoba/pacijenata s promjenama na koži povezanima s radom, one mogu privremeno regredirati, ali se opet pojavljuju nakon ponovljene izloženosti (2). Ne treba zanemariti ni činjenicu da zemljopisni, profesionalni, ekonomski, pa čak i socijalni čimbenici, mogu utjecati na različitu izloženost iritansima/alergenima, pa tako i na manifestacije kontaktnog dermatitisa koje se mogu razlikovati od jednoga do drugoga dijela svijeta (5).

Prema opsežnoj poljskoj studiji o učestalosti profesionalnih bolesti kod stomatologa i liječnika, stomatolozi su na prvom mjestu, vjerojatno zbog uporabe različitih kemikalija, rukavica, lijekova itd. (3). Štoviše, nedavna istraživanja u našoj zemlji pokazala su da su profesionalne kožne bolesti među stomatolozima često povezane s uporabom rukavica (35 %) i to uglavnom zbog dugotrajne izloženosti lateksu jer stomatolozi katkad svaki radni dan nose rukavice i po osam do deset sati (1, 9, 10). U nedavnoj japanskoj studiji ističe se da je 46,4 % stomatologa prijavilo kronični ekcem ruku, i to najčešće oni s atopijom, zatim oni koji su često prali ruke i oni koji se nisu koristili dezinficijensima za ruke na bazi alkohola (11).

Kako bi se osigurala odgovarajuća dijagnostika, obrada i liječenje, stomatološko osoblje i studenti trebali bi posjetiti dermatovenerologa. Najčešći dijagnostički postupci u slučaju kožnih promjena povezanih s radom su alergološki testovi (epikutani i/ili kožni ubodni test) (2, 6). Potrebno je također odgovarajuće njegovati kožu (zaštitne kreme za ruke, sapuni za osjetljivu kožu) i primati odgovarajuću terapiju. Iako je to naširoko poznato, zaštitne se mjere često ne prakticiraju dovoljno.

Ispitanici i metode

Istraživanje je odobrilo Etičko povjerenstvo Stomatološkog fakulteta Sveučilišta u Zagrebu (br. 05-PA-26-6 / 2015). Sudjelovanje je bilo dobrovoljno, a ispitanici su bili uključeni neovisno o ranijoj pojavi promjena kože povezanih s radom.

Istraživanje je obuhvatilo 444 ispitanika (stomatologe, dentalne asistente, zubne tehničare, studente stomatologije) koji su popunili upitnik (244 ga je ispunilo on-line, a 200 na papiru). Ispitanici su bili profesionalno osoblje (261 stomatolog, 37 dentalnih asistenata, 3 zubna tehničara) iz različitih stomatoloških institucija i 143 studenta stomatologije (druge, četvrte i šeste godine) Stomatološkog fakulteta Sveučilišta u Zagrebu. Oni koji su izjavili da su primijetili kožne promjene povezane s poslom, izdvojeni su za daljnju analizu (n = 249).

Upitnik

Ispitanici su odgovarali jesu li na koži primijetili promjene te, ako jesu, na kojim dijelovima tijela; jesu li se podvrgnuli liječenju i na koji način; jesu li bili na alergološkom testiranju; jesu li se koristili sapunima za osjetljivu kožu i zaštitnim kremama za ruke (tablica 1.).

tients with work-related skin lesions, the lesions recede, but relapse again after renewed exposure (2).

We should not neglect the fact that geographical, occupational, economic and even social factors can result in different exposures to irritants/allergens and, consequently, patterns of contact dermatitis which can differ from one part of the world to another (5).

According to an extensive Polish study of occupational skin disease frequency among dentists and physicians, dentists rank first, possibly due to the use of different chemicals, gloves, drugs, etc. in their everyday work (3). Moreover, recent Croatian research showed that occupational skin diseases among dentists are often related to glove use (35%) mostly due to high exposure to latex gloves as dentists may wear gloves 8 to 10 hours every working day (1,9,10). In a recent Japanese study among dental workers, 46.4% of dentists self-reported chronic hand eczema which was commonly reported by atopics, those who frequently washed their hands, and those who did not use alcohol-based hand rub disinfectants (11).

In order to ensure appropriate diagnostics, workup and treatment, dental professionals and students should see a dermatologist in particular. The most common diagnostic procedures in cases of work-related skin lesions are allergy tests (patch test and/or skin prick test) (2,6). It is necessary to take care of skin adequately by use of protective hand creams, soaps for sensitive skin, and receive appropriate therapy. Although this is widely known fact, protective measures are not sufficiently taken.

Subjects and methods

Prior to the researching, ethical approval from the Ethics Committee of the School of Dental Medicine, University of Zagreb (Ref. No. 05-PA-26-6/2015) was obtained. Participation in the survey was voluntary and the respondents were included regardless of their history of work-related skin lesions.

The research included 444 subjects (dentists, dental assistants, dental technicians, dental students) who filled out a questionnaire (244 filled it out online and 200 on paper).

The respondents were 301 dental professionals (261 dentists, 37 dental assistants, 3 dental technicians) from different dental institutions and 143 dental students (second, fourth, and sixth-year) of the Zagreb School of Dental Medicine. Those who stated they had noticed work-related skin lesions were singled out (249 of them).

Questionnaire

It was requested that respondents specify if they had observed any lesions (itchy rash) on their skin and, if they had, where they were localized; had they undergone any treatments and in what way; were any allergy tests performed; and had they used any soaps for sensitive skin and any protective hand creams (Table 1).

Tablica 1. Upitnik
Table 1 A questionnaire

Pitanje • Question	Odgovor • Answer
Spol • Gender	M Ž • F
Zanimanje • Occupation	Student stomatologije (koja godina?)_____ • Dental student (which year?)_____ Stomatološko osoblje (koje?) (staž?)_____ • Dental professional, which? (years of work?)_____
Jeste li primijetili kožne promjene koje povezujete s poslom? • Have you observed work-related skin changes (itchy rash)?	Ne • No Da • Yes
Gdje su se promjene pojavile? • Where did these changes appear?	Samo na šakama i prstima • Hands and fingers only Druga lokalizacija • Other localizations
Jeste li dosad liječili te promjene? • Have you treated these lesions till now?	Ne • No Da, samostalno • Yes, on my own Da, kod liječnika opće prakse • Yes, at general practitioner Da, kod dermatovenerologa • Yes, at dermatologist
Jeste li se dosad podvrgnuli alergološkim testiranjima? • Have you already undergone allergy tests?	Ne • No Ne znam • Do not know Da (kojima?) _____ • Yes, if yes, which _____?
Koristite li se sapunom za osjetljivu kožu? • Do you use any of soaps for sensitive skin?	Ne • No Katkad • Sometimes Da • Yes
Koristite li se zaštitnom kremom za njegu ruku? • Do you use any of hand protective creams?	Ne • No Da, nakon svakog pranja • Yes, after every hand wash Da, 1 – 2 puta na dan • Yes, 1-2 times a day Da, nekoliko puta na mjesec • Yes, several times a month

Statistička analiza

U statističkoj analizi korišteni su Fisherov egzaktni test i χ^2 test. Za ispitivane varijable određen je hipotetski očekivani omjer od 50 % prema 50 %.

Rezultati

Od 444 ispitanika, njih 249 (56,1%) uočilo je promjene na koži. Slika 1. prikazuje njihovu lokalizaciju.

Analiza rezultata liječenja nije pokazala statistički značajnu razliku između onih koji su tražili pomoć i onih koji nisu (tablica 2.). Značajno je više onih koji su samostalno liječili promjene od onih koji su potražili pomoć dermatovenerologa ili liječnika opće prakse ($p = 0,006$).

Analiza ranijeg testiranja na alergije pokazala je da su samo 83 ispitanika (33 %) bila na takvim testovima (bez statističkog značenja; $p < 0,001$).

Analiza korištenja sapuna za osjetljivu kožu osoba koje su same uočile kožne promjene pokazala je da se njima redovito koristi samo 39 ispitanika (16 %), 112 ih je upotrebljavalo

Statistical analysis

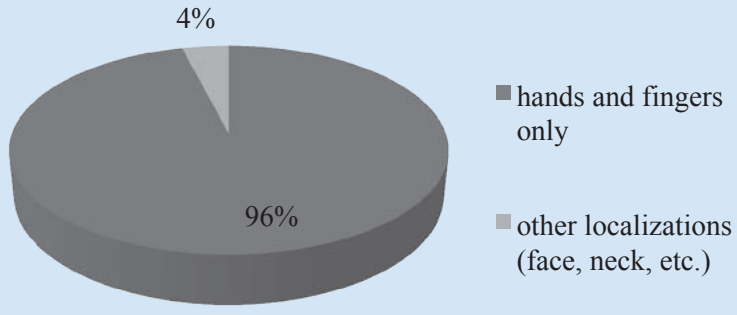
The Fisher's exact test and χ^2 test were used in the statistical analysis. The hypothetical expected ratio of 50%: 50% was determined for the variables tested.

Results

Out of 444 respondents, 249 (56.1%) observed skin lesions. Figure 1. shows their localizations.

Analytic results regarding treatment showed no statistically significant difference between the number of those who had sought assistance and those who had not (Table 2.). As regards subjects who undertook some treatment-related measures, we found that the number of those who took self-prescribed therapy was significantly higher than the number of those who sought assistance from a dermatologist or, at least, from a general practitioner ($p=0.006$).

The analysis of respondents' histories of allergy tests showed that only 83 subjects (33%) had undergone such tests (without statistical significance $p<0.001$).



Slika 1. Lokalizacije kožnih promjena
Figure 1 Localization of skin lesions.

Tablica 2. Postotak ispitanika koji je poduzeo mjere liječenja i vrste liječenja (n = 249)*
Table 2 Percentage of respondents who underwent lesion treatments and the ways of treatment (n=249)*

		Broj ispitanika • Number of respondents	Načini liječenja • Ways of treatment
Nisu liječili promjene • No treatment	**n**	113	
	%	45%	
Liječili su promjene • Underwent treatment	**n**	90	Samostalno • Self-treated
	%	36%	
	n	8	Kod liječnika opće prakse • General practitioner
	%	3%	
	n	38	Kod dermatovenerologa • Dermatologist
	%	15%	

* U slučaju više odabranih odgovora ispitanici su svrstavani u skupinu većeg specijalista. • In the cases where several ways of treatment had been applied, the more specialized ones were entered.

katkad (45 %), a 98 (39 %) nikada (bez statističkog značenja; p < 0,001). Ipak, znatno je više onih koji su se dnevno ili barem povremeno koristili sapunom za osjetljivu kožu od onih koji ga nikada nisu upotrijebili (p = 0,017).

S obzirom na primjenu zaštitnih krema za ruke kod onih koji su primijetili kožne promjene, većina se tim sredstvom (61 %) koristila jedan do dva puta na dan, a samo sedam % ih nije upotrebljavalo. Statistički je među osobama koje su uočile promjene na koži bilo više onih koje su se koristile zaštitnom kremom za ruke od onih koje nisu to činile (p < 0,001). Kod svih koji su se koristili zaštitnom kremom za ruke bilo je znatno više onih koji su je upotrebljavali svaki dan od onih koji su se njome koristili samo nekoliko puta na mjesec (p < 0,001). Učestalost uporabe zaštitnih krema za ruke vidi u tablici 3.

Usporedbom spola s traženjem medicinske pomoći i korištenjem sapuna za osjetljivu kožu, nisu ustanovljene statistički značajne razlike između spolova. No analizom korištenja zaštitnih krema za ruke uočeno je da su se njima žene češće koristile od muškaraca (97 % prema 73 %; p < 0,001).

The analysis of sensitive skin soaps use by persons who had observed lesions showed that only 39 respondents (16%) used them regularly, 112 respondents (45%) used them sometimes and 98 (39%) never (without statistical significance p<0.001). Nevertheless, there was a significantly higher number of those who had used a soap for sensitive skin daily or at least occasionally than the number of those who had never used one (p=0.017).

Considering care with protective hand creams, of those who had observed skin lesions the majority (61%) had used them 1-2 times per day, while only 7% respondents had not. Statistically, the number of persons who had observed skin lesions and used protective hand creams was significantly higher than those who had observed lesions and had not used them (p<0.001). Of those who had used protective hand creams, there were significantly more of those who used them daily than those who used them only a few times a month (p<0.001). The frequency of the protective hand cream use is shown in Table 3.

Regarding gender and the assistance-seeking and sensitive-skin soap use factors, no statistically significant differences between genders were established. However, as regards the protective hand cream use factor, the following differences were observed: women used protective cream more often than men (97% vs. 73%; p<0.001).

Tablica 3. Broj ispitanika koji se koristi zaštitnim kremama za ruke (po učestalosti)
Table 3 The number of respondents using any of hand care creams, by frequency

	Nakon svakog pranja ruku • After every hand washing	1 – 2 puta na dan • 1-2 times a day	Nekoliko puta na mjesec • Several times a month
N	25	152	55
%	10%	61%	22%

Rasprava

Promjene na koži povezane s izloženošću na radnom mjestu razmjerno su česte kod stomatološkog osoblja i studenata, no kako im se ne posvećuje dovoljno pozornosti, njihova profesionalna etiologija može ostati neprepoznata (2). Osim stomatologa, asistenata i tehničara, posebno oprezni trebaju biti studenti jer se kožne promjene mogu pojaviti čim počnu raditi u ordinacijama (što se često pripisuje alergiji na lateks, iako je to samo jedan od mogućih uzroka). Tako je nedavno istraživanje provedeno na studentima stomatologije pokaza-

Discussion

Skin lesions in dental professionals and students, connected to exposure at the workplace, are relatively common. Dental professionals and students appear to pay little attention to them and, consequently, their professional etiology can remain unrecognized (2). Apart from dentists, assistants and technicians, dental students should particularly be cautious because skin lesions can occur as soon as they start working in dental offices (which is often attributed to a latex allergy although this is only one possible cause). Thus, a recent study

lo da je njih pet % imalo alergiju na lateks, pretežno u obliku svrbeža ruku (64,5 %), ekcema (19,4 %) i kontaktne urtikarije (16,1 %) (12). Naši nedavni rezultati pokazali su da je samo kod sedam % stomatološkog osoblja i studenata dokazana alergija na lateks u kožnom ubodnom testu, što korelira s navedenom studijom (13).

Prema rezultatima našeg istraživanja koža šake zahtijeva posebnu njegu i zaštitne mjere jer se većina promjena (96 %) pojavljuje upravo na rukama, što odgovara grčkom istraživanju stomatološkog osoblja, a to je i očekivano s obzirom na to da su ruke najčešće izložene iritansima i alergenima zbog prirode stomatološkog posla (14).

No kada se promjene pojave, važno ih je pravodobno prepoznati i poduzeti odgovarajuće zaštitne mjere (poput zaštitne odjeće, mjera opreza vezanih uz rad i dosljedno liječenje s obzirom na stanje) (4). Prije spomenuto japansko istraživanje također je pokazalo nedostatak znanja među stomatološkim osobljem kad je riječ o zaštitnim mjerama kože, što upućuje na potrebu za edukacijom (11). Prema našim rezultatima, znatan broj (45 %) anketiranog stomatološkog osoblja i studenata s kožnim promjenama nije liječen adekvatno, niti je posjetio dermatovenerologa, a znatno je više onih koji su sami sebi propisivali terapiju od onih koji su potražili pomoć specijalista. Čini se da je druga prepreka bila nedostatak svijesti kod zubara i studenata o mogućim uslugama uključenim u zdravstveni sustav i kako se njima koristi.

Istaknimo da je kad je riječ o alergološkim testiranjima, samo 33 % naših ispitanika bilo na takvim ispitivanjima (prije našeg upitnika), unatoč opaženim promjenama. Važno je ustanoviti i jesu li i koji su alergeni odgovorni za promjene na koži kako bi se izbjegli. Nažalost, prema rezultatima drugih ispitivanja, osobe s profesionalnim alergijskim dermatitisom nisu potpuno svjesne važnosti alergološkog testiranja. Jedna studija pokazala je da se pojedini ispitanici nakon dvije godine nisu mogli sjetiti rezultata testiranja (15).

Stomatološko osoblje i studenti također nisu svjesni potrebe za zaštitom kože sapunima za osjetljivu kožu i zaštitnim kremama. Naši rezultati pokazali su da su ispitanici koji su primijetili nepoželjne promjene tek katkad upotrebljavali sapune za osjetljivu kožu (45 %), iako je zdravstvenom osoblju njihova uporaba preporučena. Preporučuje im se i da dezinficiraju ruke dezinficijensima na bazi alkohola koji sadržavaju sredstvo za vlaženje te, ako se koriste rukavicama od lateksa, da odaberu one bez pudera ili navuku pamučne rukavice ispod njih (13, 16, 17).

Naše istraživanje pokazalo je i da 61 % ispitanika rijetko primjenjuje zaštitnu kremu (1 – 2 puta na dan), iako to njihovo stanje zahtijeva. To se može objasniti neadekvatnim edukativnim mjerama (18, 19). Treba biti svjestan potrebe za zaštitom epidermalne barijere kremama, osobito u slučaju iritativnog kontaktnog dermatitisa jer može spriječiti pojavu promjena (20). Također je značajno veći broj osoba koje su primijetile kožne promjene i koristile se zaštitnim kremama za ruke od onih koje to nisu činile ($p < 0,001$). Naši su rezultati pokazali i da su se žene češće koristile zaštitnim kremama za ruke od muškaraca (97 % u odnosu na 73 %), vjerojatno zato što one općenito vode više brige o njezi kože. Odgovarajuća uporaba krema za kožu radi zaštite epidermal-

of dental students established that 5% of them had manifested a latex allergy, mostly as hand itching (64.5%), hand eczema (19.4%) and contact urticaria (16.1%) (12). Similarly, our recent results showed that only 7% of dental professionals and students were allergic to latex in skin prick test, which corresponds well to the subjects in the above mentioned study (13).

According to our survey results, the skin of the hands requires particular care and protective measures as most of the lesions (96%) occurred on the hands, corresponding to a Greek survey of dental professionals, which is expected since hands are highly exposed to irritants and allergens due to the nature of dental work (14).

However, when lesions occur, it is important to recognize them on time and take adequate protective measures (such as personal protective clothing, work-related precautionary measures and consistent stage-related treatment) (4). Also, the previously mentioned Japanese research showed a lack of knowledge among dental workers about skin protective measures, pointing to the need for education on skin protective measures (11). According to our results, a notable number (45%) of surveyed dental professionals and students with skin lesions had not been treated adequately or had not been to a dermatologist, with a significantly higher number of those who had taken self-prescribed therapy than those who sought a dermatologist¢s assistance. It seems that lack of awareness among dental professionals and dental students of the services available within healthcare system and how to effectively access them was another barrier.

Also, regarding allergy testing, only 33% of our respondents underwent such tests (before our questionnaire), despite having observed lesions. However, it is important to determine whether and which allergens are responsible for the exacerbation and perpetuation of skin lesions so that they can be avoided. Unfortunately, according to the results of other study, the individuals with occupational contact allergic dermatitis are not fully aware of the importance of allergy testing: one study showed that some had failed to recall the allergy test results after two years (15).

Dental professionals and students are also insufficiently aware of the need to protect their skin with protective soaps and creams. Our results showed that respondents who had observed undesirable skin lesions mostly used soaps for sensitive skin only sometimes (45%) even though it is recommended that healthcare workers use them. It is also recommended they disinfect their hands with alcohol-based disinfectants containing moisturizers and, if using latex gloves, use powder-free gloves or cotton under (13,16,17).

Our study showed that 61% of respondents only rarely apply protective creams (1-2 times per day) despite the fact that their condition requires it. This can be explained by inadequate educational measures (18,19). It is necessary to be aware of the need for protection of the skin barrier with protective creams, especially in case of irritant contact dermatitis wherein future occurrence of lesions or exposure to irritants can be prevented (20). Likewise, a significantly higher number of individuals who had observed skin lesions used protective hand creams than those who had not ($p<0.001$). Also, our results showed

ne barijere može biti korisna, osobito zbog okluzivnog učinka rukavica (4).

Osim toga, Svjetska zdravstvena organizacija (SZO) također navodi preventivne mjere i njegu kože – uključujući i izbjegavanje određenih loših navika (pretjerano pranje ruku, uporaba tople vode, neodgovarajući postupci pri sušenju ruku i stavljanje rukavica, prekomjerno utrljavanje dezinficijensa, itd.) (17). Mi također ističemo da je potrebna provedba takvih mjera, uz uključivanje obrazovnih programa i opskrbljivanje zaštitnim kremama za ruke radi prevencije kontaktnog dermatitisa i ekcema ruku (21). Postoje dokazi da su za zdravstveno osoblje s ekcemom šaka učinkoviti preventivni i edukativni programi o njezi kože te individualno savjetovanje (za alergične osobe na temelju alergoloških testiranja). Odgovarajuće mjere mogu poboljšati kvalitetu života i pozitivno utjecati na težinu kožnih promjena i ponašanje u vezi sa zaštitom kože (pranje ruku, uporaba rukavica) (22). No one se ne mogu uvijek provesti u praksi zbog, na primjer, ekonomskih ograničenja pojedine zemlje (13, 18, 23, 24).

Zaključak

S obzirom na to da stomatološko osoblje i studenti često ne poduzimaju odgovarajuće zaštitne mjere ili dijagnostičke postupke i obično nisu educirani o potrebnim preventivnim i zaštitnim mjerama, početne promjene na koži mogu katkad završiti kroničnim kožnim bolestima te na kraju utjecati na njihovu učinkovitost i produktivnost. Kako bi se osiguralo odgovarajuće informiranje i educiranje stomatološkog osoblja i studenata te onih u srodnim područjima, potrebne su opsežne javnozdravstvene kampanje kako bi se poboljšalo njihovo znanje o njezi i profesionalnim bolestima kože.

Sukob interesa

Autori nisu u sukobu interesa.

that women used protective hand creams more often than men (97% vs. 73%), possibly because women generally pay more attention to skin care. An adequate use of suitable skin barrier creams can be helpful especially considering the prolonged influence of glove use, which has an occlusive effect (4).

Additionally, preventive measures and skin care are also outlined by the World Health Organization (WHO) – including the avoidance of certain bad habits (excessive hand washing, use of hot water, inadequate procedures when drying hands and putting gloves on, excessive rubbing-in of disinfectants, etc.) (17). We also highlight the importance of preventive measures and their implementation, along with the inclusion of educational programs and the provision of hand moisturizers, which are useful for prevention of occupational contact dermatitis and hand eczema (21). There are evidence-based guidelines for preventing healthcare-associated diseases that can be useful for healthcare workers with hand eczema and, also, effective skin care educational prevention programs and individual counselling (for allergic persons based on allergy testing). The adequate measures are potentially useful in both the clinical encounter and in quality improvement. They have a positive effect on skin lesion severity and skin protective behavior (hand washing, glove use) (22). However, they cannot always be implemented, for example, because of the economic capacity of a country. (13,18,23,24).

Conclusion

Since dental professionals and students often fail to undertake adequate measures or diagnostic procedures and are commonly not trained in taking necessary preventive and protective measures, initial skin lesions can sometimes lead to chronic occupational skin diseases and eventually affect their efficiency and productivity. To ensure adequate training of dental professionals and students and those in related fields, extensive campaigns and public-health efforts are required to improve their knowledge of skin care and occupational diseases.

Conflict of interest

None declared.

Abstract

Objectives: To determine prevalence of undesirable, work-related skin lesions and their localizations in dental professionals and students, and to collect data about diagnostic procedures they undergo and skin care they take when these lesions occur. **Subjects and methods:** Our research included 444 respondents (dentists, dental assistants, dental technicians, dental students) who filled out a questionnaire. They were asked to specify if they had observed any lesions on their skin and where; if they had undergone any treatments and in what way; if they had undergone any allergy tests; and if they had taken any protective measures. **Results:** Of all the respondents that took part in the survey, 249 (56.1%) reported undesirable skin reactions commonly on their hands and fingers (96%). Before our survey, only 15% of them had seen a dermatologist, while 33% had undergone allergy tests (without a dermatologists' clinical examination). Also, 45% of them sometimes used soaps for sensitive skin and the majority (61%) of them used protective hand creams 1-2 times per day. **Conclusion:** Although a large number of dental professionals and students have noticed work-related skin lesions, only some of them sought dermatologists' professional help and most of them did not take care of their skin adequately when those lesions occurred. According to the results of this study, it is necessary to take additional preventive measures to increase dental professionals' and students' awareness of occupational dermatoses and adequate skin care.

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