130 - EPIDEMIOLOGICAL ASCENT OF THE PRESENCE OF SIGNS AND SYMPTOMS OF THE OCCUPATIONAL POISONING IN MANICURES IN SÃO PAULO CITY (S.P) 2014-2015

ELIANE MARIA DO NASCIMENTO TIMÓTEO;
DANILO HENRIQUE LOPES;
BRUNA DOS SANTOS ROCHA;
SORAYA GARCIA AUDI
Faculdades Metropolitanas Unidas – Campus Santo Amaro, São Paulo, S.P., Brazil
eliane.timoteo@hotmail.com

doi:10.16887/86.a1.130

INTRODUCTION

The modern society is every day more concerned and focused on trends of the beauty market, in turn, regularly submit new technologies and forms of aesthetic treatment highly sought after by consumers who are looking for a socially acceptable standard of beauty (MIRANDA; BRAIDANTE; REIS, 2014).

Among all the treatments offered, the most consumed by the Brazilian, the habit of doing your nails regularly, is the use of nail polish, consequently, thereby increasing the number of professional beauty segment that (OLIVEIRA, 2014).

The nail polishes are organic compounds, mainly constituted of nitrocellulose, solvents, plasticizers, resin and colorings. The nitrocellulose is soluble in organic solvent and, after evaporation of the same, is deposited as a hard, glossy synthetic foil. The solvents used are acetate, alcohols and toluene (MIRANDA; BRAIDANTE; REIS, 2014).

Toluene is an aromatic hydrocarbon, volatile and colorless, derived from petroleum and significant use in the industrial sector, used as a solvent in the production of colorings, inks, detergents and nail polishes (EISENBERG, 2003; MICHEL, 2000), which acts on the central nervous system presenting signs and symptoms since an outbreak of ethanol intoxication, with irritating action on the skin and mucosa, even more severe as nephrotoxicity, hepatotoxicity and hearing loss (OGA, 2003).

It has two absorption pathways: respiratory system, for inhaled vapors that affect the lungs and, hence, to the bloodstream and; for the skin, leading to drying and irritation of the same as a metabolic product are cresol (less than 1%), and its intermediate is the benzaldehyde. Inhaled toluene is metabolized to hippuric in the urine after 12 hours, making it a good marker for poisoning toluene (FORSTER, 1994; FUJII et al 1999).

Lead is heavy, toxic metal that accumulates in the body, interfering with the operation of enzymes and cell membranes forming stable complexes (MOREIRA; MOREIRA, 2004).

There are sources of lead exposure, ranging from industries that use this product to food, alcoholic beverages, cosmetics, toys and some herbal medicines (CAPITANI; PAOLIELLO; ALMEIDA, 2009), that, once the separating movement soft tissue and bone, causing lead poisoning (MOREIRA; MOREIRA, 2004).

Formaldehyde is a colorless substance soluble in water with high potential toxicological, mutagenic and carcinogenic, but most often cause respiratory irritation and skin CITTADIN-SOARES; FORTUNATO, 2010; LORENZINI, 2010).

RDC 15/2013 the National Health Surveillance Agency (ANVISA) determines the use of 5% formaldehyde for product formulation nail polish, whose purpose is to retain and provide a hard aspect (ANVISA, 2013).

The chemical composition of nail polish, raise concerns with manicures in occupational level, since many of them are exposed during working hours, thus causing complications that affect its posture, with the appearance of some lesions, pain and other signs and symptoms that may arise occupational intoxication (MACHADO et al, 2010; MUNCHEN, 2012).

MATERIALS AND METHODS

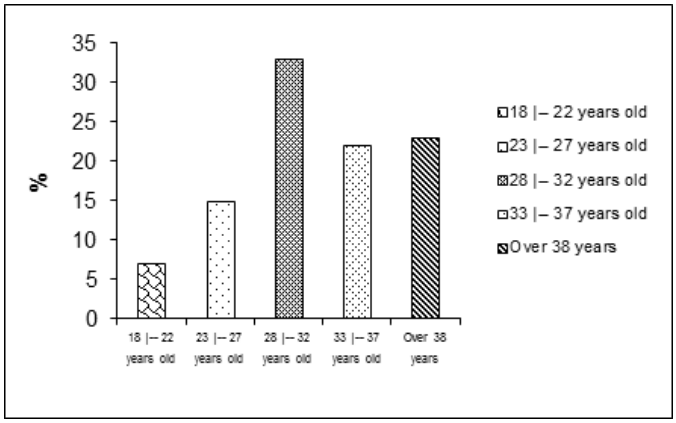
It´s a descriptive epidemiological study of character, cross, quantitative. Made up of 100 individuals who agreed to participate in the survey by answering a form containing objective questions that were used as variables. Prospective study subjects were asked to answer a previously validated form, and is considered a collection of direct information, whose questions were used as variables. The ethical aspects have been clarified and respected through the Consent Filling and Informed Shortly after the candidate has objectives and importance of research, based on Resolution N° 196/96 (Conselho Nacional de Saúde – M.S). To the study, surveys were carried out in nail polish stores and beauty salon in São Paulo (SP). The information, after compiled, it was presented in tables and graphs simple frequency expressed in numbers and percentages. For statistical composition used the arithmetic mean as a measure of central tendency. The discussion took place from the bibliography.

OBJECTIVE

Check for signs and symptoms of occupational poisoning in manicures, correlating them with the working time in function.

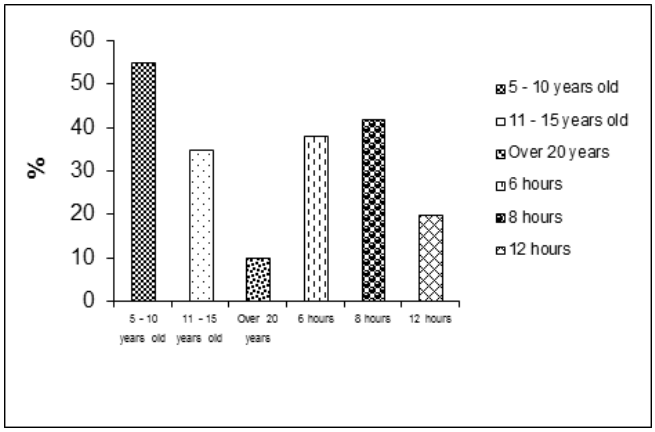
RESULTS

Graph 1: Distribution percentages to the age group of respondents, in São Paulo city, S.P. 2015



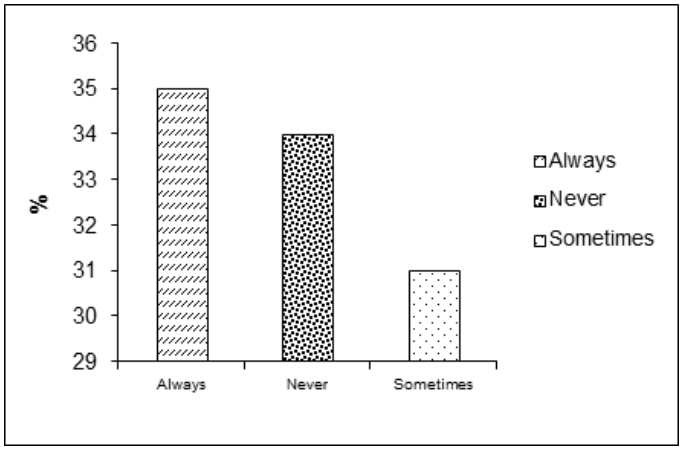
Comments: The graph 1 shows that most respondents are aged between 28 |-- 32 years old.

Graph 2: Distribution percentages with respect to length of service and hours worked of respondents in São Paulo city, S.P. 2015



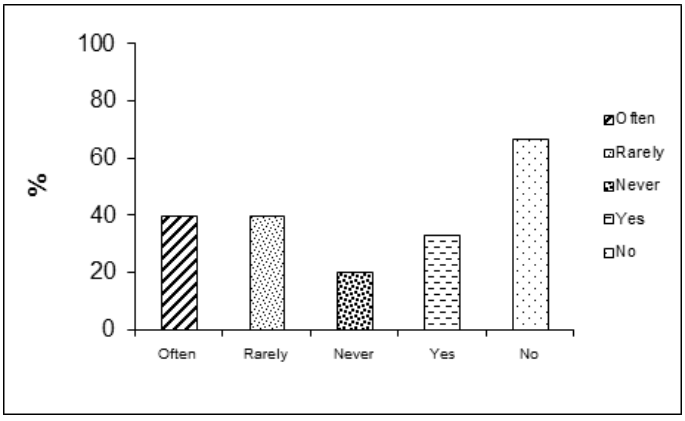
Comments: The graph 2 shows that most respondents work between 5 and 10 years in the profession and en average 8 hours a day.

Graph 3: Distribution percentages with respect to home care to weekend of respondents in São Paulo city, S.P. 2015.



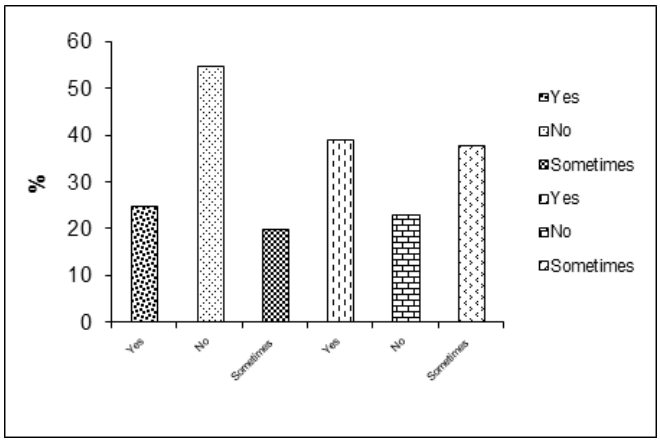
Comments: The graph 3 shows that about 35% of respondents do home care on weekends.

Graph 4: Distribution percentages for the presence of headache and removal of respondents in São Paulo city, S.P. 2015



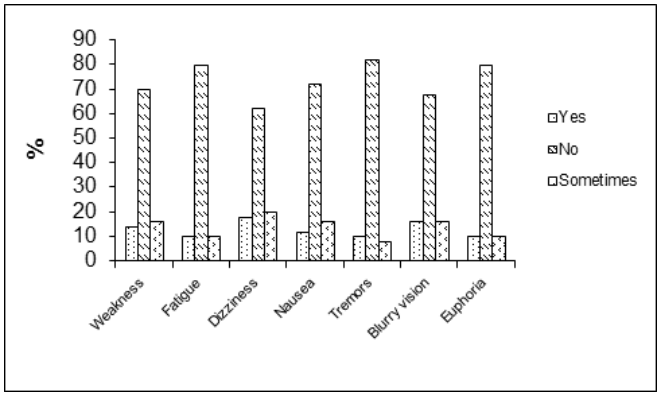
Comments: The graph 4 shows that there is little difference between respondents who often have headaches and rarely present. A little over 60% of respondents didn't have to move away from service.

Graph 5: Distribution percentages with respect to the presence of manifestations of allergies and use of PPE respondents in São Paulo city, S.P. 2015



Comments: The graph 5 shows that most respondents don't have allergic manifestation. The use of Personal Protective Equipment has a small difference between use and always at time.

Graph 6: Distribution percentages with respect to symptomatology of respondents in São Paulo city, S.P. 2015.



Comments: The graph 6 shows that the presence of symptomatology presented by the respondents.

CONCLUSION

The obtained results suggest that, there exist evidences of manifestations of poisoning at the expense of the toluene and the formaldehyde, with reference to the presented symptoms, but without evidences of signs.

BIBLIOGRAPHY

ANVISA, 2013. Acessoria Regulamenta Uso de Chumbo e Outras Substâncias em Cosméticos. RDC 15/2013. disponível em

<http://www.anvisa.gov.br//bvms.saude.gov.br/bvs.saúdelegis/anvisa/2013/rdc0015l26_03_2013pdf> acesso em 08 set 2015.

CAPITANI, E. M. PAULIELLO, M. M. B. ALMEIDA, G.R.C. Fontes de Exposição Humana ao Chumbo no Brasil. Medicina (Ribeirão Preto) 2009; 42(3); 311-8.

CITTADIN-SOARES, E. C. FORTUNATO, J, J. Toxicidade do Formaldeído: uma revisão não Sistemática de Literatura. Tubarão, 2010.

EISENBERG, D.P. Neurotoxicity and Mechanism of Toluene Abuse. Einstein Quar J Biol Med 2003;19:150-159.

FORTER, L. M. K. TANNHAUSER, M. TANNHAUSER, S. M. Toxicologia do Tolueno: Aspectos Relacionados ao Abuso. Revista de Saúde Publica, 28(2): 167-72, 1994.

LORENZINI, Silvia. Percepção dos Cabelereiros sobre a toxicidade do Formaldeído. Trabalho de conclusão de Curso de Especialização Saude Publica. Universidade Federal Rio Grande do Sul. Porto Alegre, Maio 2010.

MACHADO, D. C.; SANTOS, M. M. A.; BACHIEGA, J. C.; CORRÊA, J. C. F.; MESQUITA-FERRARI, R. A.; FERNANDES, K. P.S.; BUSSADORI, S.K.; Avaliação do Desconforto Postural em Manicures. Conscientia Saúde. 2010;9(3), p. 375-380.

MIRANDA, A. C. G.; BRAIDANTE, M,E,F.; REIS,M,T.; Esmalte de unha: uma Temática para Ensino de Funções Orgânicas. Universidade Santa Cruz Do Sul: pg 477-484, 2014.

MOREIRA, F. R. MOREIRA, J. C. OS Efeitos do Chumbo Sobre o Organismo Humano e seu Significado Para a Saúde. Rev. Panam Salud/Pan AM J Public Health 15(2), 2004.

MUNCHEN, S. Cosméticos uma Possibilidade de Abordagem para o Ensino a Química. Dissertação de Mestrado. Universidade Federal de Santa Maria. Santa Maria, 2012.

OGA, S. Fundamentos de Toxicologia.2 ed. São Paulo: Atheneu; 2003.

OLIVEIRA, Juliana A. Fazendo a Vida Fazendo Unhas, Uma analise Sociológica do Trabalho de Manicures. Tese de Doutorado ao Programa de Pós Graduação em Sociologia da Faculdade de Filosofia Letras e Ciências Humanas da Universidade de São Paulo. São Paulo, 2014.

EPIDEMIOLOGICAL ASCENT OF THE PRESENCE OF SIGNS AND SYMPTOMS OF THE OCCUPATIONAL POISONING IN MANICURES IN SÃO PAULO CITY (S.P) 2014-2015.

ABSTRACT

The nail polishes are organic compounds, it's mainly principally nitrocellulose, solvent, plasticizer, resin and colorings, constituted by formaldehyde, toluene and lead. Therefore, the constant exposure to this cosmetic (nail polish), for the professionals that use it, can lead to intoxication over time the biological system by solvents present in its composition. Objective: This study aims to check for signs and symptoms of occupational poisoning in manicures. Methodology: The study is conducted epidemiological descriptive type, transversal, quantitative, whose sample consisted of 100 individuals who agreed to participate in the survey, answering to a formulary, which contains objective questions that were used as variables. The information, after compiled, it was presented in tables and graphs simple frequency expressed in numbers and percentages. The ethical aspects have been respected, according to Resolution N° 196/96 (CNS-MS). Results: It showed that 33% of subjects were between 28 and 32 years of age; 55% had 5-10 years of profession; 42% works 8 hours per day; 35% is accustomed to work in weekends. Regarding the signs and symptoms, 70% reported present weakness; 65% blurry vision; 62% dizziness; 25% allergic manifestation; 25% don't use PPE. Conclusion: The obtained results suggest that, there exist evidences of manifestations of poisoning at the expense of the toluene and the formaldehyde, with reference to the presented symptoms, but without evidences of signs.

KEYWORDS: Nail polish, Manicures, Solvents, Occupational Health, Intoxication.

ÉTUDE ÉPIDÉMIOLOGIQUE DE LA PRESENTANT DES SIGNES ET SYMPTÔMES D'INOXICATION PROFESSIONNELLE EN MANUCURE DE LA VILLE DE SÃO PAULO (SP) 2014-2015.

RÉSUMÉ

Le vernis à ongles est un composé organique, ils sont principalement nitrocellulose, des solvants, des plastifiants, des colorants et des résines constitué par le formaldéhyde, le toluène et le plomb. Par conséquent, l'exposition constante à la cosmétique (émail), par les professionnels qui l'utilisent, peut entraÌner au fil du temps l'intoxication'"do système bioçogique par solvant organique. Objectif : vérifier la présence de signes et de symptômes d'empoisonnement au travail dans des manucures. Méthodologie : Il s'agit d'une étude épidémiologique, descriptive, transversale, d'une approche qualitative et quantitative, dont l'échantillon était composé de 100 personnes qui ont accepté de participer à une enquête, répondant à un formulaire contenant un objectif des questions qui ont été utilisés comme des variables. Les données, une fois compilées, ont été présentées dans les tableaux et graphiques de fréquence simple exprimé en nombre et en pourcentage. Aspects éthiques ont été respectées, conformément à la Résolution Nº 196/96 (CNS-MS). Résultats: On a fait observer que 33 % des interrogés ont entre 28 et 32 ans ; 55 % avaient de 5 à 10 ans dans l'immobilier; 42 % travaillant 8 heures par jour ; 35 % travaillent habituellement au cours du week-end. En ce qui concerne les signes et les symptômes, 70 % ont déclaré le faiblesse actuelle ; 65 % floue vision ; vertiges de 62 % ; 25 % de cadres allergique ; 25 % n'ont pas fait usage de équipement de protection individuelle. Conclusion: Les résultats suggèrent qu'il y a preuve de l'intoxication par le toluène et le formaldéhyde, Selon les symptômes présentés, mais aucune preuve de signes.

MOTS-CLÉS: vernis à ongles, ongles salons, solvants, santé au travail, intoxication.

ASCENSO EPIDEMIOLÓGICO DE LA PRESENCIA DE SEÑALES Y SÍNTOMAS DE LA INTOXICACIÓN OCUPACIONAL EN MANICURAS DE LA CIUDAD DE SÃO PAULO (S.P) 2014-2015.

RESUMEN

El esmalte de uñas es un compuesto orgánico, son constituidos principalmente por nitrocelulosa disolvente, plastificante, resina y colorantes, constituidos por formaldehido, tolueno y chumbo. Por lo tanto, la exposición continua a eso cosmético (esmalte), por los profesionales que lo utilizan, pude causar a lo largo del tiempo intoxicación del sistema biológico por los disolventes presentes en su composición. Objetivo: Este trabajo tiene como objetivo verificar la presencia de señales y síntomas de intoxicación ocupacional en manicuras. Metodología: El estudio hecho es del tipo epidemiológico descriptivo, transversal, cuantitativo; la muestra de quién fue compuesta por 100 individuos que estuvieron de acuerdo en hacer parte de la pesquisa, contestando a un formulario, que contiene cuestiones objetivas que fueron utilizadas como variantes. Los datos, después de compilados, fueron presentados en tablas y gráficos de frecuencia simple expresos en numerales y porcentajes. Los aspectos étnicos fueron respetados, de acuerdo con la Resolución Nº 196/96 (CNS-MS). Resultados: Fue observado que 33% de las entrevistas tenían entre 28 y 32 años de edad; 55% constaban desde 5 hasta 10 años de profesión; 42% trabajaban 8 horas diarias; 35% se acostumbraban a trabajar en los fines de semana. Con relación a los señales y síntomas, 70% relataron presentar debilidad; 65% visión borrosa; 62% mareo; 25% manifestación alérgica; 25% no utilizan EPI. Conclusión: Los resultados obtenidos sugieren que, existen evidencias de manifestaciones de intoxicación por cuenta del tolueno y del formaldehido, con referencia a los síntomas presentados, pero sin evidencias de señales.

PALABRAS CLAVE: Esmalte de uñas, Manicuras, Disolventes, Salud Ocupacional, Intoxicación.

LEVANTAMENTO EPIDEMIOLÓGICO DA PRESENÇA DE SINAIS E SINTOMAS DE INTOXICAÇÃO OCUPACIONAL EM MANICURES DA CIDADE DE SÃO PAULO (S.P.) 2014 – 2015.

RESUMO

O esmalte de unhas é um composto orgânico, são constituídos principalmente por nitrocelulose, solventes, plastificante, resina e corantes, constituídos por formaldeído, tolueno e chumbo. Portanto, a exposição constante a esse cosmético (esmalte), pelos profissionais que o utilizam, pode acarretar ao longo do tempo intoxicação do sistema biológico por solventes presentes em sua composição. Objetivo: Este trabalho tem como objetivo verificar a presença de sinais e sintomas de intoxicação ocupacional em manicures. Metodologia: O estudo realizado é do tipo epidemiológico descritivo, transversal, quantitativo; cuja amostra foi composta por 100 indivíduos que concordaram em participar da pesquisa, respondendo a um formulário, contendo questões objetivas que foram utilizadas como variáveis. Os dados, depois de compilados, foram apresentados em tabelas e gráficos de freqüência simples expressos em números e percentagens. Os aspectos éticos foram respeitados, de acordo com a Resolução Nº 196/96 (CNS-MS). Resultados: Observou-se que 33% das entrevistadas tinham entre 28 e 32 anos de idade; 55% contavam com 5 a 10 anos na profissão; 42% trabalham 8 horas por dia; 35% costumam trabalhar no fim de semana. Com relação aos sinais e sintomas, 70% relataram apresentar fraqueza; 65% visão turva; 62% tonturas; 25% quadros alérgicos; 25% não fazem uso de EPI's. Conclusão: Os resultados obtidos sugerem que, existem evidências de quadros de intoxicação por tolueno e formaldeído, segundo os sintomas apresentados, mas sem evidências de sinais.

PALAVRAS-CHAVE: Esmalte de Unha, Manicures, Solventes, Saúde Ocupacional, Intoxicação.