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Expression of cytokeratin 19 on the epithelial cell of buccal mucosa exposed azo

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Azo is dye synthesis used in batik industries. It can be toxic to the tissue when exposed via inhalation, swallowing or contact directly. Expression of cytokeratin will change on hyperplastic and cancer of the oral mucosa. Expression of cytokeratin 8, 18, 19 was strong in the epithelial cells that undergo excessive hyperproliferation and oral mucosal changes into leukoplakia and squamous stratification carcinoma. The purpose of this study was to analyze the expression of cytokeratin 19 in the epithelial cells of the buccal mucosa exposed azo. The study involved 30 male subjects divided into 2 groups, 15 subjects were exposed azo and 15 were control. Criteria for exposed azo subject were worked at batik coloring parts for at least 5 years, while control was being not exposed to azo dyes. The method of collecting buccal mucosal epithelial cells was exfoliative cytology using cytobrush. Expression of cytokeratin 19 were analyzed using monoclonal antibody cytokeratin 19 (Novus Biologicals, USA) and immunohistochemical staining (ABC Staining Kit, ImmunoCruz, Santa Cruz Biotechnology, USA). Data were analyzed using independent t-test. The results showed a negative expression on the control while positive expression in the exposed group. T-test analysis showed significant differences in the positive expression of the exposed group compared to controls. In conclusion, azo dye could increase expression of cytokeratin 19 on buccal mucosa epithelial cells.

Biography

Juni Handajani graduated as a Dentist, pursued Master of Dental Science and Doctoral degree from Faculty of Dentistry, Gadjah Mada University, Indonesia. On March 23, 2011, she received PhD degree in Dental Science from Niigata University, Japan. She is a Lecturer and Researcher at Department of Oral Biology, Faculty of Dentistry, Universitas Gadjah Mada since 1998 until now. Since January 2016, she is Head of Master Program Dental Health Science, Faculty of Dentistry, Universitas Gadjah Mada.

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