

ABSTRACT

The grilling of chicken satay could give the best taste but it also can release some dangerous contaminant products called Polycyclic Aromatic Hydrocarbons (PAH). Chicken satay grills are people who are at the risk of high exposure to those compounds. Cytotoxicity of buccal mucosal epithelial can be reflected by the increase of the karyolysis frequency that might be caused by exposure to hazardous compounds through inhalation and ingestion pathways. The purpose of this study was to know the effect of smoked grilled satay exposure on karyolysis frequency in buccal mucosal epithelia of chicken satay grills in Sleman, Yogyakarta.

Among the subjects, 10 of them were exposed to the grilling smoke while other 10 people were not exposed and were considered as control group. The subjects consisted of 5 men and 5 women for each group. The buccal mucosal epithelia cells were taken by an exfoliative cytology method used cytobrush and stained using Papanicolaou's staining method. The cells were observed microscopically with 400x magnification. The data obtained was the number of karyolysis cells in 1000 cells observed.

Independent T-Test showed a significantly difference of the karyolysis frequency of both groups ($p < 0.05$). The conclusions of this study were smoked grilled satay exposure significantly influenced the karyolysis frequency of the buccal mucosal epithelia. The karyolysis frequency was increased significantly after 4 years of exposure.

Key words: Smoked grilling satay, Buccal mucosal epithelia, Karyolysis frequency