

Dampak pembuatan model karsinogenesis oral terhadap esofagus tikus sprague dawley

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Abstrak

This study was carried out to investigate the effect of 4NQO oral induction in oesophagus of male rat. Sixteen male Sprague Dawley rats were divided into three experimental groups and one untreated group as control. The experimental groups were applied with 0.5% 4-nitroquinoline 1-oxide on the dorsal mucosa of tongue thrice weekly for 8, 16 or 24 weeks, one brush stroke per application. At the end of the 36th week, all rats were sacrificed and the tongue and oesophagus were excised and fixed in 10% buffered formalin for 24 hours. The H&E sections were prepared for histological examination. The microscopical assessment showed that all rat tongues whether applied with 4NQO for 8, 16 or 24 weeks were identified having Squamous Cell Carcinoma (SCC). Microscopical examination of oesophagus indicated that 75% of the rats applied with 4NQO for 16 weeks showed hyperkeratosis, and 80% and 20% of the rats applied with 4NQO for 24 weeks showed malignancy changes and hyperkeratosis, respectively. No histological changes were detected either in the tongue or the oesophagus of the control rats. It was concluded that the effect of carcinogenic induction in oral mucosa caused malignant changes in oesophagus.