



The Bulletin of TOKYO DENTAL COLLEGE	Published by Tokyo Dental College, Japan
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	PRINT ISSN : 0040-8891
The Bulletin of Tokyo Dental College	
Vol. 48 (2007), No. 1:9-17	

## Effects of Sex Hormones on Rat Tongue Carcinoma Induced by 4-Nitroquinoline 1-Oxide (4NOO)

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(Received June 19, 2002) (Accepted February 19, 2007)

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**Abstract:** We investigated the regulatory effects of sex hormones on tongue carcinoma initiated by orally administration 4-nitroquinoline 1-oxide (4NQO) to rats. Animals of either sex were classified into three groups. The male rats in each group received an estrogen administration (Me), orchiectomy (Mor), or both treatments (Me/or) while the female rats also received testosterone administration (Ft), ovariectomy (Fov), or both treatments (Ft/ov). The differences in the carcinogenic progress among these groups were examined by macroscopic and microscopic observation of tongue tissues. The incidence of cancer in the tongue tissue was 100% in the group reinforced with testosterone (testosterone+group) (Ft, Ft/ov, Me) but only 56.0% in the group not reinforced with testosterone (testosterone-group) (Fov, Mor). These findings suggest that sex hormones play a role in the onset of 4NQO-induced tongue carcinoma.

**Key words:** 4NQO, Tongue carcinoma, Rat, Sex hormone, Carcinogenesis

[PDF (604K)] [References] [Errata]

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To cite this article:

Jhuma Haque, Akira Katakuta, Isao Kamiyama, Ryo Takagi, Takahiko Shibahara and

Hiroyasu Noma: "Effects of Sex Hormones on Rat Tongue Carcinoma Induced by 4-Nitroquinoline 1-Oxide (4NQO)". The Bulletin of Tokyo Dental College, Vol. **48**: 9-17 (2007) .

doi:10.2209/tdcpublication.48.9 JOI JST.JSTAGE/tdcpublication/48.9

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