

## 肿瘤防治

# 口腔鳞癌及癌前病变组织中iNOS基因的表达

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**摘要** 背景与目的: 通过检测口腔鳞癌及癌前病变组织中诱导型一氧化氮合酶(inducible nitric oxide synthase, iNOS) mRNA及其蛋白产物的表达情况, 探讨iNOS基因在口腔鳞癌发生、发展过程中的作用。材料与方法: 应用免疫组化(SABC法)和原位杂交(ISH)2种方法分别检测10例正常口腔黏膜、12例上皮单纯增生、28例上皮不典型增生及32例口腔鳞癌组织中iNOS蛋白和iNOS mRNA的表达。结果: iNOS蛋白及iNOS mRNA均表达于细胞浆。正常口腔黏膜组织中未发现iNOS蛋白及iNOS mRNA表达; 上皮单纯增生组、上皮不典型增生组、口腔鳞癌组中iNOS基因用免疫组化法检测的阳性表达率分别为16.67%(2/12)、67.86%(19/28)和78.13%(25/32), 用原位杂交方法分别为16.67%(2/12)、71.43%(20/28)和75%(24/32), 免疫组化和原位杂交检测的结果显示两者具有良好的一致性; 上述4组不同口腔黏膜组织中iNOS蛋白与iNOS mRNA表达差异有统计学意义( $P < 0.01$ ); 随着上皮不典型增生程度的加重, iNOS蛋白及iNOS mRNA表达均显著增强( $P < 0.05$ ); 但口腔鳞癌组与上皮不典型增生组之间iNOS蛋白及iNOS mRNA阳性表达差异均无统计学意义( $P > 0.05$ )。结论: iNOS基因在口腔黏膜上皮组织中的表达可能与口腔鳞癌的发生发展中起重要作用,对iNOS基因的检测可为口腔鳞癌早期诊断提供依据。

**关键词** [口腔鳞癌](#); [癌前病变](#); [诱导型一氧化氮合酶基因](#); [原位杂交](#); [免疫组化](#)

## The Expression of iNOS Gene in Oral Squamous Cell Carcinoma and Precancerous Lesion

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**Abstract** BACKGROUND AND AIM: To investigate the expression of inducible nitric oxide synthase (iNOS) mRNA and its protein in Oral Squamous Cell Carcinoma (OSCC) and Precancerous Lesion(PL); in order to explore the impact of iNOS gene expression on the development of OSCC. MATERIALS AND METHODS: Immunohistochemistry technique (SABC) and in situ hybridization (ISH) assay were used to detect the expression of iNOS protein and iNOS mRNA in 10 specimens of normal oral mucosa, 12 oral epithelial simple hyperplasia (SH), 28 oral epithelial atypical hyperplasia (AH) and 32 OSCC. RESULTS: Both the expression of iNOS protein and mRNA were negative in the 10 normal oral mucosa. The positive rates in SH, AH and OSCC were 16.67%, 67.86% and 78.13% by SABC, 16.67%, 71.43% and 75% by ISH, respectively. No iNOS gene abnormality was found in OSCC by SABC and ISH. The positive rates of iNOS protein and iNOS mRNA were significant among these four groups of oral mucosa ( $P < 0.01$ ). Significant correlation between the expressions of iNOS protein and mRNA and the grade of atypical hyperplasia (AH) ( $P < 0.05$ ) was found. No significant difference of iNOS gene expression was found between AH and OSCC groups ( $P > 0.05$ ). CONCLUSION: The up-regulation of iNOS gene indicated that it may play important roles in the pathogenesis and development of OSCC. Determination of its gene products may provide evidence for early diagnosis.

**Keywords** [oral squamous cell carcinoma](#) [precancerous lesion](#) [inducible nitric oxide synthase gene](#) [in situ hybridization](#) [immunohistochemistry](#)

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