# Diagnostic Value of $^{99m}$Tc-BLM in the Detection of Oral Malignant Tumor

K. KUNIKATA and Y. ISHII
*Department of Stomatology*
T. MORI and K. HAMAMOTO
*Central Clinical RI Division*
*Kyoto University, School of Medicine, Kyoto*

The purpose of the present study is to investigate the tumor specific accumulation of $^{99m}$Tc-BLM in to the malignant neoplasms in the oral region, comparing it with that of $^{67}$Ga-citrate, and to evaluate the diagnostic value of $^{99m}$Tc-BLM in the detection of oral malignancies.

The cases include 21squamous cell carcinoma, 1 adenocarcinoma, 1 Hodgkin's disease, 1 reticulum cell sarcoma, 1 angiosarcoma, 1 mixed tumor, 1 squamous cell hyperplasia, 1 fibrous dysplasia, and 9 inflammatory lesions.

Positive accumulation has been observed in 19 out of 22 cases of oral cancer and 3 cases were negative. There was no remarkable difference in the rate of positive deposit between $^{99m}$Tc-BLM and $^{67}$Ga-citrate. However, in 4 cases with maxillary carcinoma examined immediately after therapy, positive results have been obtained. This findings shows that $^{99m}$Tc-BLM may be also accumulated into the tissues injured by the treatment. Therefore, $^{99m}$Tc-BLM scanning seems less valuable for the evaluation of the effect of treatment than $^{67}$Ga-citrate.

The other malignant tumors, Hodgkin's disease, reticulum cell sarcoma, and angiosarcoma, showed remarkably positive delineation in the $^{67}$Ga-citrate scintigram, but in the $^{99m}$Tc-BLM, Hodgkin's disease was negative and the others were slightly positive.

A benign mixed tumor on the palate was false positive in the $^{67}$Ga-citrate, and negative in the $^{99m}$Tc-BLM. Conversely a squamous cell hyperplasia was false positive in the $^{99m}$Tc-BLM. A fibrous dysplasia was false positive in both scintigrams.

Inflammatory lesions were 5 maxillary sinusitis, 3 submandibular sialoadenitis and 1 submandibular lymphadenitis. Some of these inflammations revealed false positive results in both scintigrams.

From these results, $^{99m}$Tc-BLM as well as $^{67}$Ga-citrate can be considered useful for the detection of oral malignant tumors, but $^{67}$Ga-citrate is more effective especially for tumors such as Hodgkin's disease, reticulum cell sarcoma and angiosarcoma. At the same time, it is necessary to pay attention to the false positive accumulation in the cases of squamous cell hyperplasia, fibrous dysplasia and inflammatory changes.

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