

를 투여한 환자에서 $^{99m}\text{Tc O}_4^-$ 를 이용한 타액선 신틸그라피를 시행하여 computer로 시간방사능 곡선을 분석한 후 pH 3.0의 비타민 C 용액으로 자극하고 $^{99m}\text{Tc O}_4^-$ 제거율을 측정하여 다음과 같은 결과를 얻었다.

1) $^{99m}\text{Tc O}_4^-$ 의 타액선 시간방사능곡선에서 기울기는 방사선요소치료후 감소하였으며 악하선에서보다 이하선에서 더 뚜렷하였다.

2) 방사성요소 치료후 $^{99m}\text{Tc O}_4^-$ 의 시간방사능 곡선의 정점에서 $^{99m}\text{Tc O}_4^-$ 의 섭취율과 비타민 C에 의한 자극후 $^{99m}\text{Tc O}_4^-$ 의 분비는 악하선에서보다 이하선에서 현저히 감소하였다.

3) 이러한 변화는 방사성요소 투여후 7일에 현저하였으며 14일에는 회복되는 경향을 보였다.

이상에서 방사성동위원소를 이용하여 타액선의 기능의 변동을 객관적으로 평가할 수 있었다.

43. Intrahepatic ^{131}I -Lipiodol Therapy for Hepatocellular Carcinoma : ^{67}Ga Scintigraphic and Angiographic Follow-up

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Twelve patients with hepatocellular carcinoma (8: massive, 4: multinodular) were treated with intrahepatic ^{131}I -lipiodol injection in attempt to deliver 12,000 rad or higher tumor dose. Patients were followed 6 to 24 months with serial ^{67}Ga scan, serum AFP and angiography. Pre and post serial ^{67}Ga scan (planar & SPECT) were compared to those of angiographic findings.

Eight patients who were responsive showed simultaneous reduction of tumor size and serum AFP levels as well as decreased gallium uptake while four patients showed increased tumor sizes and recurrent lesions in the hepatic and/or extrahepatic tissues.

These objective findings appear to be useful to assess the therapeutic response especially with ^{67}Ga scan which might indicate the remained activity of tumor or recurrent tumor lesions noninvasively.

44. ^{67}Ga Scintiscan in the Early Diagnosis of Hepatocellular Carcinoma: Comparison with Other Imaging Modalities

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Hepatocellular carcinoma (HCC) is a very common malignancy in the Far East and the early diagnosis plays an important role in the management of patients with HCC; the earlier the diagnosis, the better the possibility for patients with HCC to have surgical resection or ^{131}I -lipiodol therapy.

^{67}Ga -citrate has been used successfully in the detection of HCC as radiogallium has avidity to HCC. Prospectively, 16 patients with HCC measuring less than 5 cm in diameter were evaluated with planar ^{67}Ga scan, single photon emission tomography (CT) and angiography. The diagnosis of HCC was established either by needle biopsy or surgery. The result of our comparative study is tabulized below;

Modality	Detection Rate	Percentage
US	11/16	68.8
CT	14/16	87.5
^{67}Ga Planar	9/16	56.3
^{67}Ga SPECT	13/16	81.3
Angiogram	15/16	93.8

In conclusion, ^{67}Ga SPECT is a sensitive diagnostic modality in the detection of small HCCs especially occurring in cirrhotic patients or in the periphery of the liver. It is also sensitive in the staging as well as in the follow-up of patients with HCC.