

17. Diagnostic Value of Colloidal ¹⁹⁸Au and ¹³¹I-Rose Bengal in the Liver Diseases*

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Most of the liver function tests so far routinely carried out in the clinic have been mainly the reflection of the diffuse pathological changes of the liver. Recently, the clinical interest has been directed to the development of diagnostic methods of the localized diseases of the liver, such as, the abscesses, cysts or tumors. Some attempts have been made in this field and the isotopic techniques have turned out to be of considerable values.

In the present study, colloidal ¹⁹⁸Au and ¹³¹I Rose Bengal were used in 173 cases with various liver diseases and normal controls, and the following studies were done to evaluate the diagnostic values of these isotopes.

1. Two hundred microcuries of colloidal ¹⁹⁸Au was intravenously given, and the hepatic uptake, blood disappearance rate and splenic uptake were determined with the body surface counting; morphological changes were visualized with liver scan; and the false positive and false negative findings of the scan picture were studied with the aid of various phantoms.

2. Ten to twenty microcuries of ¹³¹I rose bengal was intravenously given, and the hepatic clearance rate was determined with the surface counting detector and the interrelationships between the liver function states and ¹³¹I hepatic uptake were analyzed.

3. The splenic uptake of colloidal ¹⁹⁸Au was studied in relation to the liver function states. The possibility of the spleen scan with ¹⁹⁸Au was also discussed.

* 誌上発表.

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18. 門脈圧亢進症における 脾静脈系肝外短絡率の測定 (第 2 報)

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門脈圧亢進症13例について体外計測により脾静脈系の肝外短絡率を測定し, 吐血下血の既往の有無, 食道静脈瘤, 経脾門脈撮影像, ¹⁹⁸Au 肝排除率, 術前脳波との関係を求め, また Pitressin 注入前後の短絡率の変化, 術中, 上下腸間膜静脈より tracer を注入した場合の放射能曲線を比較検討した.

方法: 第 8 肋間腋窩線にて脾穿刺, RISA 0.4 μ c/kg 体重注入, 右房上にて体外より計測, 直径 20mm の straight bore type colimeter を用う. medical spectrometer を通し 30 inch/sec のスピードで magnetic tape に一度蓄積した後 3 inch/sec のスピードで再生, 記録計に放射能曲線を描かせる. 曲線の 2 つの山の peak より垂線を下し, 各山の前半の面積を K, P とすると $\frac{K}{K+P} \times 100(\%)$ にて脾静脈系の肝外短絡率を表わす.

結果: 症例はバンテ症候群 10 例, 肝硬変症 1 例, 先天性門脈異常 1 例, 日本住血吸虫症 1 例. 1 例を除き全例 2 相性の曲線となり短絡率は 0~74%.

(1) 食道造影による食道静脈瘤の程度ならびに吐血下血の既往の有無には必ずしも平衡関係は認められない.

(2) 経脾門脈撮影による副血行の発達とはよく相関を示し, 短絡率が 10% 以上で副血行が必ず造影される.

(3) ¹⁹⁸Au 肝排除率とはある程度平衡関係を示すのではないと思われる.

(4) 術前脳波所見とはよく相関を示し, 短絡率 20% 以上ではなんらかの異常所見が見出される.

(5) Pitressin 10 単位静注により短絡率は減少 peak time は延長を示す. 肝内血管抵抗の減弱によるものと推定される.

(6) 開腹時上下腸間膜静脈より注入した場合の各放射能曲線は, 脾静脈系のもものと明らかに異なり, 脾静脈系の短絡率のみをもって, 肝外短絡全体を代表するわけにはいかない.