

499

EVALUATION OF Ga-67 LABELED FIBRINOGEN CONJUGATED WITH WATER-SOLUBLE POLYMER CONTAINING DEFEROXAMINE: IN VIVO BEHAVIOR IN ANIMALS. K.Takahashi, J.Takahashi, S.Okano, M.Kurami, N.Ueda, M.Hazue, *Y.Ohmomo. **A. Yokoyama, NIHON MEDI-PHYSICS CO., LTD. Chiba, *Osaka college of Pharmacy, Matsubara, **Faculty of Pharmaceutical Sciences Kyoto University, Kyoto

We have developed Ga-67 labeled fibrinogen (fib) conjugated with dialdehyde starch (DAS) containing deferoxamine (DFO) (Ga-67 DFO-DAS-fib) as a new thrombus imaging agent.

On our further investigation, in vivo stability of Ga-67 DFO-DAS-fib was evaluated in rats. The blood was collected at several post-administration periods, and plasma samples were prepared by the centrifugation. Then the radioactivities in plasma were analyzed by gel filtration HPLC and electrophoresis. The electrophoretic patterns and elution profiles on HPLC of radioactivities in plasma were identical with those of Ga-67 DFO-DAS-fib. Neither free Ga-67 ions nor Ga-67 transferrin was observed in plasma over the period of the observation. While, the radioactivities excreted in the urine were mainly Ga-67 DFO and Ga-67 DFO-DAS.

These data suggested that Ga-67 ions were strongly bound to DFO-DAS-fib in blood, and no transchelation of Ga-67 ions from fib-DAS-DFO to transferrin occurred.

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501

CLINICAL APPLICATION OF Ga-67-DFO-DAS-FIBRINOGEN. T.Watanabe, T.Ohtake, T.Momose, J.Nishikawa, M.Iio, H.Yasuhara, S.Ohashi, Y.Takayama, M.Shirakawa and Y.Tada. University of Tokyo, Tokyo.

The detectability of Ga-67-DFO-DAS-Fibrinogen (Ga-67-Fib) for thrombus was clinically evaluated mainly on patients with suspected arterial thrombosis. Each patient underwent scintigraphy on one day and two days after the administration of Ga-67-Fib. All had subcutaneous test injection prior to the examination, and none of them showed abnormal reaction. Most of 9 preoperative cases had aortic aneurysm, and other examinations or subsequent operations revealed thrombus in 7 of them. Ga-67-Fib scan was positive in 71%(5/7) of these cases. One of preoperative case which had no thrombus on the subsequent operation showed marked uptake in the aorta on the first scan but the uptake apparently decreased on the second scan. This finding was supposed to indicate that the uptake was not by thrombus but by blood pool. Seventeen grafts in 11 cases who had had bypass operation showed positive rate of 76%(13/17). Different degrees of uptakes were seen in different kinds of grafts, suggesting specific clotability on the inner surface of each kind of graft. We concluded that Ga-67-Fib scan was effective in detecting thrombus and sufficiently of clinical use.