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PLATELET KINITICS BY IN-111-OXINE--CASE OF RESIDUAL ACCESSORY SPLLEN. T.Kimura, H. Suzuki, A.Suzuki, Y.Sakata, Y. Komatsu, M. Ishizawa. The 1st Dept. of Int. Med., Hirosaki Univ. School of Med..

Platelet kinetics by In-111-oxine has been studied in 4 cases of I.T.P. and one case of aplastic anemia. The test was thought to be indispensable for the diagnosis of these diseases. We have encountered a case of residual accessory spleen after splenectomy for I.T.P. : Patient was 44 y.o. female who had had purpura and gingival bleeding since 1977. Usual treatment of prednisolone and vincreistine did not show any effect with platelets count in the order of 40000. Splenectomy was done on Aug. 1981 after Tc-99m-Sn-colloid scan which did not show any finding of aacessory spleen. Platelet count increased teporarily up to 523 thousands after splenectomy. But it gradually decreased down to 20000 with hemorrhage in spite of prednisolone administration. On Dec. 1982, In-111-oxine scan dosclosed accessory spleen with the size of 1.5cm which was not shown by CT scan and USG. Laparotomy proved the accessory spleen and her platelets counts increased up to 50000-75000 after removal of the accessory spleen. The study by In-111-oxine labeling platelet is useful for the detection of accessory spleen.

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STUDY OF PLATELET KINETICS BY RADIOISOTOPE LABELED AUTOLOGOUS PLATELETS IN IDIOPATHIC THROMBOCYTOPENIC PURPURA. T.Yui,T.Uchida, H.Umetsu,Y.Takagi,M.Hirakuri,S.Matsuda and S.Kariyone. Fukushima Medical College. Fukushima.

Idiopathic thrombocytopenic purpura (ITP) is a disorder in which platelets react with an autoantibody and are destroyed by macrophages. Study of platelet kinetics in 24 patients with ITP by In-111 or Cr-51 labeled autologous platelets were performed. Labeling procedure were done by Thakur's method in In-111-oxine, by Dewanjee's method in In-111-tropolone and by recommended method of international committee for standardization in haematology in Cr-51.

In normal subjects, platelet disapperance curves and survival times were simillar by both In-111 and Cr-51 method. Simultaneous determination using both In-111 and Cr-51 in normal subjects and in the patients with ITP, showed almost same results each other. In 24 patients with ITP, platelet survival times were markedly shortened and platelet turnover rate were normal value or increased. Spleen per liver ratio of In-111 method were smaller than those of Cr-51 method in the same case, because the limited small area of the organs were detected by collimated scintillation detector in Cr-51 method while whole area of the organs were measured by scintillation camera in In-111 method.

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MEASUREMENT OF THROMBOXANE B_2, 6-KETO-PROSTAGLANDIN $F_{1\alpha}$ AND β-THROMBOGLOBULIN IN THE THROMBOEMBOLIC DISORDERS. M.Hirakuri,H.Umetsu,T.Yui, S.Matsuda,K.Owada,T.Uchida and S.Kariyone. Fukushima Medical College. Fukushima.

Recently, the meaning of interactions between platelets and blood vessel walls began to be well recognized in the thrombotic process. We measured thromboxane B_2 (TXB_2), 6-Keto-Prostaglandin $F_{1\alpha}$ (6-Keto-$PGF_{1\alpha}$) and β-thromboglobulin (β-TG) in plasma by radioimmunoassay for the purpose of diagnosis and prediction of thromboembolic disorders. For the determination of TXB_2 and 6-Keto-$PGF_{1\alpha}$ in plasma, radioimmunoassay kits using I-125-TXB_2 and I-125-6-Keto-$PGF_{1\alpha}$ instead of H-3-labeled materials, were used. Because, I-125-activity could be easily measured with high sensitivity by well type scintillation counter. A fundamental studies were done on the measurement of TXB_2 and 6-Keto-$PGF_{1\alpha}$ by the kits. The recovery of TXB_2 and 6-Keto-$PGF_{1\alpha}$ in plasma were 85-125% and 97-146%, respectively. The range of intraassays were 20% and 23.3% and that of interassays were 20% and 13.3% for TXB_2 and 6-Keto-$PGF_{1\alpha}$, respectively. The mean plasma levels of TXB_2, 6-Keto-$PGF_{1\alpha}$ and β-TG in normal subjects were 59.3±21.8 pg/ml, 125.9±45.7pg/ml and 26.0±11.0ng/ml, respectively. In thromboembolic disorders, plasma level of TXB_2 and β-TG showed slightly high while that of 6-Keto-$PGF_{1\alpha}$ were low or normal.

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IMAGING OF EXPERIMENTAL VENOUS AND ARTERIAL THROMBOSIS IN RABBITS. T.Suzuki, K.Kawanishi, K.Akuta, S.Aoki,J.Sato,K.Masuda,N.Hamazu and T.Yamazaki. Shiga Medical School, Ohtsu. K.Torizuka. Kyoto University Medical School, Kyoto. Y.Oomomo,K.Horiuchi and A.Yokoyama. Kyoto University,Kyoto.

We tried to make images of the experimental thrombus in the vein and artery in New Zieland White rabbits using Ga-67-fibrinogen -DSA-DFO and Ga-67-DFO-fragment E1,E2 and evaluated the possibility of imaging non fresh thrombus. We induced the venous thrombus in the femoral vein with formalin and arterial thrombus by modified Baumgartner's method. The 1-hour after the venous thrombus could make " hot spot " in the femoral vein with Ga-67-fibrinogen-DAS-DFO; the 1-day after venous thrombus increased its uptake there and the 2-day after venous thrombus could not increase its uptake there. But, Ga-67-DFO-fragment E1,E2 could increas its uptake only in the 1-hour after venous thrombus and not in the 1-day and 2-day venous thrombus. Ga-67-DFO-fragment E1,E2 could increase its activity in the thrombus in the femoral artery at 6 hours after its venous administration but its uptake imaging was poor.

Because Ga-67-fibrinogen-DAS-DFO could make good image of the venous thrombus 6 hours after its administration, it is useful for diagnosis of the fresh venous thrombus.