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THE SIGNIFICANCE OF RENOGRAM IN A LOCAL HOSPITAL. A.Okazaki, I.Takahashi, H.Niibe and N.Kato. Gunma University School of Medicine and Tatebayashi Kosei Hospital. Maebashi and Tatebayashi.

This hospital has used renogram as the first renal function test, especially in preoperative examination.

From 1979 through 1977, a total renograms of 2760 times with 1810 cases were examined. Of these cases, 240 cases of surgery except for urology showing abnormal renogram patterns were investigated about the significance of renogram as preoperative renal function test.

Following results were obtained.

1) Only 4 cases which have almost no function were stopped undergoing surgical procedure by renogram. 2) Slightly and moderately damaged renogram patterns enabled to do radical operation without having renal failure postoperatively. 3) Severely damaged renogram patterns brought 4 cases to death by accompanying postoperative renal failure. But 3 of 4 cases were advanced in stage. 4) In spite of nearly low and flat renogram patterns, 6 of 8 cases had temporary recovery without giving up their operations.

The above may prove the usefulness of renogram as preoperative renal function test when pre- and postoperative renal function was managed well on the basis of preoperative renogram pattern. Furthermore, it was beneficial for patients that excluding intravenous urography had been possible.

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EVALUATION OF SHUNT PATENCY WITH I-131 IODOHIPPURATE SODIUM AND TWO CHANNEL RENOGRAM. S.Mitsuka, N.Kohno, and S.Sawai. Kiryu Kosei General Hospital.

We report a simple and exact method for detecting the patency of surgical cerebrospinal fluid shunt, which is frequently used to treat some types of hydrocephalus. It is important to evaluate the patency of shunt system for observation of postoperative course.

Until recently, I-131 RISA and scintillation scanner had been used for this purpose, but this isotope had not always been able to prepare and the examination had been usually performed few days after planning in our hospital.

According to the availability of isotope and equipment, I-131 iodopipurate and renogram were used for evaluation of shunt patency in our hospital recently. Approximately 10-20 μ ci of I-131 iodohippurate was injected into the flushing device of shunt system with a 26 gauge needle and two detectors of renogram were set over head and abdomen. Shunt patency was confirmed by crossing of two curves, outflow curve of head and inflow curve of abdomen. It is very useful method for postoperative control of patient, because this method can be performed in a short time, if necessary, and showed clearly the alternation of cerebrospinal fluid flow due to change of position of patient or by pumping of flushing device.

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EVALUATION OF SERUM β_2 -MICROGLOBULIN MEASUREMENT IN SURGICAL PATIENTS. Y.Nishida, Y.Nagamachi, N.Ogata, N.Akiyama, T.Hirasawa and T.Nakamura. Gunma University School of Medicine. Maebashi.

Renal function test is an important determination in operative patients, however, preoperative identification of patients at increased risk is difficult.

Measurements of serum β_2 -microglobulin, a clinically applicable method to determine the degree of operative risk of renal-based complications, underwent in 161 non-emergency surgical patients.

Beta₂-microglobulin was measured by radioimmunoassay technique. Patients were classified according to the age and types of diseases: Group 1, aged patients (over 60 years of age); Group 2, up to 59 years of age; Group 3, patients with benign lesions; Group 4, patients suffering from malignant diseases; Group 5, patients with liver complication.

Results

A significant increase in serum β_2 -microglobulin levels was noted in patients with abnormal PSP values in groups 1 and 2. Abnormal β_2 -microglobulin values were correlated well with the results of PSP test and serum creatinine concentration in patients with or without malignant diseases. Serum β_2 -microglobulin values did not change in patients without liver and renal complications. In advanced cancer patients, especially patients who suffered from biliary malignancy, a significant increase in β_2 -microglobulin levels was observed as compared with those of non-malignant diseases.

These data suggest that the measurement of β_2 -microglobulin was of great use for the preoperative evaluation of patients with renal abnormality in the general surgery.