Betatron radiation therapy with about 5000 rads in total tumor dose. In four of 6 patients with positive AFP there were marked regression of the tumor with a remarkable decrease of AFP in sera. The other 2 patients were not well responded. In 12 patients with negative AFP there were also remarkable regression of the tumor with a decrease of hyper-vascularity of the lesion by repeated angiographies in 9 patients.

With follow up study six out of 18 patients treated responded well to the combined treatment and survived for more than 1 year, 5 patients for 8 to 9 months and the remaining for less than 5 months. The untoward effects were not serious. Indeed there were transit leukopenia in 33% and thrombocytopenia in 67% of patients respectively.

This combination therapy can be said to be a hepatectomy, so that the lesion should be limited to certain area regardless of anatomic vasculature of the liver. Thus the cancer of the hilum of the liver may also be indicative for this therapy.

Since inoperable hepatoma was so often radiosensitive after receiving MMC this combination method would improve the results of hepatectomy, if performed before operation.

—General Lectures—(II)

(101) SOME CLINICAL PROBLEMS OF DUODENAL DIVERTICULUM


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During the one year and 8 months, we found 214 cases of duodenal diverticulum in 4813 cases of routine G—I series. Its frequency is highest (4.5%) in the diverticulum of whole digestive tract. Further, it was observed in high frequency in the second portion (pars descendens) of the duodenum. The diverticulum increased its frequency and size with age, especially over 50 years old. This fact indicates that the weakening of the connective tissue with age may concern with development of diverticulum.

We investigated the relationship between duodenal diverticulum and disorders of biliary tract. In 4813 cases of G—I series, we found 423 cases of the disorders of biliary tract by intravenous cholecystography, transcutaneous transhepatic cholangiography or endoscopic pancreaticechoangiography. In 28 to 423 cases (12.0%) of biliary tract disorders, duodenal diverticulum was found. On the other hand, in 214 cases of diverticulum, 28 cases (13.1%) of biliary tract disorders were found, which ratio was about three times higher than that in 4599 cases without diverticulum. In 28 cases of cholecystectomy for cholelithiasis, diverticulum was found in 8 to cases of choledochal stone.

We tried duodenofiberscopically to diagnose diverticulitis, and we experienced a case of diverticulitis, diagnosed by endoscopic biopsy, and resected the duodenal diverticulum.

(102) CLINICAL ASPECTS OF DUODENAL DIVERTICULA

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Duodenal fibrescopy was carried out in about 1500 cases, while duodenal diverticules were detected 61 cases (4.1%) in our series.

The sites of duodenal diverticules were as follows: 10% near the superior duodenal angle, 11% near the Santorini, 65% near the major papilla, 6% in the lower part of the descending limb and 8% in the area between the distal part and ligament of Treitz.

Duodenal diverticules were found more often in the patients in the fifth decade. The majority of them had single number (8.2%), and the rest multiple.

Peptic ulcer 21, biliary tract disorder 10, pancreatic disorder 11, papillitis 2 and miscellaneous 6 cases were associated with them, and 11 cases were without any complication.
Duodenal diverticules did not have any characteristic manifestations, in which epigastric pain, sensation of fullness and heavy sensation etc., were encountered as same as in the other upper abdominal disorders.

Some interesting cases were demonstrated, in one case there was an associated dilated pancreatic duct which was explored by endoscopic pancreatography.

(103) CLINICAL STUDIES ON DUODENAL DIVERTICULA
Tokyo Welfare Pension Hosp.

This report aims to study the participation of duodenal diverticulum to the bilio-pancreatic diseases, such as gallstone or pancreatitis, from the clinical and statistical view-points.

The results were as follows;
1) We found duodenal diverticula on 68 cases of 1710 out-patients (3.9%) examined by routine fluoroscopy of the gastro-intestinal tract during the past 12 months. They showed an increase in incidence and size with age.
2) Re-observation of preoperative X-ray films of G-I tract on 207 operated patients of gallstone during the past 4 years revealed duodenal diverticulum in 25 cases (12%). Of these 25 cases 13 showed the diverticulum near the papilla of Vater by the direct cholangiography during laparotomy.
3) Clinical findings were studied on 2 cases of jaundice, 2 of recurrent pancreatitis and one of lipomatous pseudo-hypertrophy of the pancreas, all of those had duodenal diverticulum near the papilla of Vater, but had no gallstone on laparotomy.

(104) CORRELATION BETWEEN PERIVATERIAN DIVERTICULA AND PANCREATITIS WITH TRANSIENT LIVER FUNCTION DISORDER
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Transient liver function disorder was noted in 15 cases (30.6%) out of 49 cases with pancreatitis that included no cholelithiasis. 9 cases (60%) of these 15 cases revealed fingertip-sized perivaterian diverticula by hypotonic duodenogram.

Meanwhile, remained 34 cases without liver function disorder included only 3 cases (8.8%) with duodenal diverticula.

Most of these 9 cases with diverticula and with liver function disorder showed dilated choledochus in roentgenogram, accompanied with abnormal value of serum bilirubin and alkaline-phosphatase. They had also inflammatory symptoms, i.e. fever or leucocytosis. In 4 cases with dilated main pancreatic duct among them, 3 cases had diverticula.

These findings may suggest that the perivaterian diverticula disturb normal function of the pancreas and biliary tract that might become a trigger for pancreatitis.

(105) STUDIES ON RETROGRADE CHOLANGIOGRAPHY
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Concerning to diagnosis for the segmental site of the intrahepatic lesion the retrograde cholangiography to obtain the better visualization of the main 8 segmental branches by positioning of the patient was investigated on 44 cases out of 100 cases routinely examined in our clinic.

Generally it was possible to visualize relatively good the all segmental branches by two positions; the prone and supine positions. However, there was a problem on superimposing interference between the adjacent branches. The lateral and anterior segmental branches were fairly good visualized by the prone and prone/supine position respectively without these marked superimposing interference, but the medial segmental