The serum levels of the anterior pituitary hormones in the dead group were higher than those in the good or poor outcome group, especially the level of GH. The serum level of GH was 14.7±3.0ng/ml in the dead group, whereas 5.8±0.9ng/ml in the good outcome group and 4.0±2.1ng/ml in the poor outcome group.

The responses of TSH, LH or FSH to the administration of TRH or LH-RH were depressed in the dead group. On the other hand, there were normal responses of TSH, LH or FSH following administration of TRH or LH-RH in the other two survival groups.

These findings suggested that the measurement of the anterior pituitary hormones and the responses of these hormones to their releasing hormones were useful to evaluate the severity of head injury.

FACTORS AFFECTING CEREBROSPINAL FLUID FLOW IN A SHUNT SYSTEM
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Nineteen adult hydrocephalic patients were studied to determine factors affecting cerebrospinal fluid (CSF) flow rates through a shunt system. This study was based on the previously reported method by which fluctuations of CSF flow rates through a shunt system can be measured noninvasively.

Changes in physical position affected CSF flow rates. While supine position flow rates were less than 0.01ml/min, upright position led to increases in flow rates over 0.14ml/min when tilted to 80°.

Sudden changes in respiration such as coughing also affected the flow rates.

Since the CSF flow rates were higher than average between 10p.m. and 7a.m., these changes in flow rates were considered to be related to a slight increase in ICP during the REM sleep stage.

The total daily volumes of fluid intake varied from 27ml/kg to 103ml/kg. There didn't seem to be any relationship between CSF flow rate and volume of fluid intake. Furthermore, there were no significant changes in CSF flow rates resulting from the rapid intravenous administration of 50g of Glycerol and 500—1000ml of lactated Ringer.

It was concluded that increases in the flow rate of CSF through a shunt system are related to the inclination of body, rapid changes in respiration and increased ICP during the REM sleep stage.

HISTOLOGICAL EFFECTS OF PREOPERATIVE TREATMENT FOR ESOPHAGEAL CANCER
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Our department experienced 147 cases of esophageal cancer where more than three years had elapsed since resection. As a preoperative treatment, radiotherapy and chemotherapy was applied to 86 cases of the 147 cases. This treatment was performed within one month prior to operation on the majority of these preoperatively treated cases. Two weeks after the treatment was effected, the patient underwent operation. Irradiation was 20 to 40 Grey, and chemotherapy consisted of Bleomycin, Pepleomycin, Mitomycin, 5Fu and Cysplatinum.

The histological effects were 9 cases (10.5%) of markedly effective and viable cells were not acknowledged. Moderately effective amounted to 15 cases (17.4%) and 42 cases were slightly effective (72.1%).

The cases that received chemotherapy singly were all slightly effective. The cases that received radiotherapy alone amounted to 31 cases and 3 cases (9.7%) were markedly effective. The cases that experienced a combined therapy of radiotherapy and chemotherapy amounted to 37 cases and of these, 6 cases (16.2%) were markedly effective. In combined therapy, there were 2 cases of markedly effective even with an irradiation of 20 Grey level but in irradiation-only cases, markedly effective cases were not acknowledged.

In prognosis, long-term survival cases were obtained in cases where preoperative therapy was markedly effective and lymph node metastasis was not acknowledged.

THE EFFECT OF HBO (HYPERBARIC OXYGEN) ON HEPATIC FAILURE
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As for the treatment for MOF and hepatic failure,