Discussion to n-3.

The Reexpansion of Brain after Surgery by 5 cm Skull Trephine in Case of Chronic Subdural Hematoma

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The postoperative reexpansion of brain after surgery by 5 cm skull trephine in cases of chronic subdural hematomas reported based on the experiences of 43 cases.

The course of reexpansion of brain postoperatively is divided into 3 groups by X-ray observation of location of clip which placed on the cortical surface.

Group I is rapidly reexpansion in short period progressively.

Group II is that reexpansion is gradually and has fluctuated period during this period.

Group III is that the distance between clip and inner surface increased in course of reexpansion followed gradual reexpansion.

n-4. Traumatic Subdural Hydroma

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n-5. Therapeutic Oxygen Encephalography for Posttraumatic Chronic, Low Intracranial Pressure

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In proportion to an increase of traffic, and industrial accident, quite a few patients are complaining of such indefinite symptoms as headache, heavy feeling, nausea, vomiting, vertigo, tinnitus, and numbness of arms without neurological abnormalities after head- or neck trauma. Greater difficulties would be encountered in treatment and diagnosis of posttraumatic cerebral syndrome under a situation mentioned above. A spinal tap was performed for eighty-three
patients that came to us complaining posttraumatic cerebral syndrome who showed no neurological abnormalities, revealing that twenty-five patients were of posttraumatic, chronic low intracranial pressure (PCLICP) ranging from 10 to 110 mm of water. At the last meeting of this society, the authors reported fourteen cases of PCLICP improved with global lumbar oxygen encephalography (OEG). At this meeting we are reporting forty cases of PCLICP, half of which was obtained in last year, and the rest of which in this year, and reporting some findings related with PCLICP.

(1) Relationship of GOT, GPT, LDH in both blood and cerebrospinal fluid (CSF) between PCLICP and posttraumatic cerebral syndrome with normal intracranial pressure (NICP): GOT, GPT, and LDH in blood and CSF of 15 cases of PCLICP were compared with those of 12 cases of NICP. The examination showed that GOT, LDH in CSF of the former group were slightly increased.

(2) Relationship between the hypothalamus and the PCLICP: Measurement of the 3rd ventricles in the antero-posterior pneumograms obtained from thirty-two cases of PCLICP revealed within normal limits in its height and the width. The ventricles of eight out of the forty cases were not available, because of poor filling.

(3) Relationship between autonomic nervous system and PCLICP: Mecholyl test performed for 11 cases of PCLICP and for 11 of NICP disclosed 5 cases of N-type, 3 of S-type, 3 of P-type in the group of PCLICP, and 6 of N-type, 1 of S-type, 4 of P-type in the group of NICP.

(4) Influence of OEG upon NICP: Global lumbar OEG, replacing 30 to 100 ml of CSF with the same amount of Oxygen, was carried out for 11 cases of NICP; the CSF pressure at one week after the procedure displayed no increase beyond the pressure prior to the procedure, except for one case showing only 5 mm of water of increase.

(5) Effect of OEG upon PCLICP: Global OEG was done for the forty cases of PCLICP. On the viewpoint of increase of CSF, thirty-six cases showed an increase over a pressure of 110 mm of CSF at one week after the OEG. Of the remainder three showed 100 to 105 mm, which increased up to 120 mm at 2 weeks after the OEG. Only one case was 700 mm, therefore another OEG was necessary to make an increase of 70 to 130 mm at 1 week after the OEG. The spinal fluid pressure of the 40 cases at 2 weeks after the OEG was remained within normal limits. In view of complaints, they were alleviated in five cases, but caused to disappear completely in thirty-five.

In conclusion, the authors could not make it clear how PCLICP appears, and how OEG increases the decreased pressure of CSF, they could only say that OEG makes a decreased productive ability of CSF at the chorioidal plexus recover to a normal level of the productive ability. The present authors would like to say that OEG has a therapeutic effect upon posttraumatic chronic, low intracranial pressure as Penfiled et al. reported a therapeutic one upon posttraumatic headache in 1936.