On the Classification of Subdural Collection of Fluid

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One of the complications which follow injury of the head is the accumulation of fluid between the dura and brain surface. Since the terminology of such lesion is still undivided and this lesion have been called various name like “meningitis serosa traumatica”, “traumatic arachnoiditis”, “subdural hygroma” and subdural effusion. The authors analyzed this lesion and classified into three types by operative findings and advocated each name.

1. Subdural hygroma: It has a new membrane in which contains of fluid.
2. Subdural effusion: It has collection of fluid between dura and arachnoid without a new membrane.
3. Subarachnoid dilatation: It is easily confused with above two types, but accumulation of fluid is in the subarachnoid space. This type is also seen under the epidural and subdural hematoma and depressed fracture.

Subdural hygroma is divided into three subgroups clinically.

1. Delayed type which is consists of patients who have lucid interval and shows similar course with chronic subdural hematoma.
2. Type which is consists of patients who have prolonged disturbance of consciousness.
3. Type which is consists of patients who have other intracranial hematoma and the subdural hygroma is found by operation for hematoma.

Subdural effusion is divided into six subgroups clinically.

1. Acute type which simulated the symptoms of an acute intracranial hematoma.
2. The same type as the second group of subdural hygroma.
3. Type which is consists of patients suffering from severe headache immediately after head injury with clear consciousness.
4. Delayed type.
5. Type which is consists of patients who have no symptom and subdural effusion was discovered accidently in operation for other subject.

The classification of subdural collection of fluid is clinically valuable for following difference between these two groups.

1. Remarkable difference of occurrence of delayed type in two groups is observed. Delayed type is 50% of subdural hygroma and 7% in subdural effusion.
2. The type of prolonged disturbance of consciousness is observed in same frequency in both group, but focal signs like muscle weakness and anisocoria etc. is companied more in the cases of subdural effusion than in the subdural hygroma.
3. A new membrane is not made in the course of time in our operative
finding.
From above reasons subdural collection of fluid must be divided into three
group.

n-7. Angiographic Study on the Acute Traumatic Intracranial Hematoma relating to the Operative Prognosis

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The present study was done to draw the attention to the correlation between the angiographic findings and the operative prognosis in our series of the acute traumatic intracranial hematoma. To decide the extent of the hematoma the following points were angiographically noticed.

1) Inanterioposterior view
   a) Thickness of the avascular area
   b) Falx sign
   c) Change in A and B line (averas and Wood)

2) In lateral view
   Change in the difference between H1 line and H2 line (Vlahovitch) in length

The result is follows.

1) The thickness of the avascular area has no correlation with the operative mortality in the epidural hematoma, while in the subdural hematoma the thicker avascular area, the higher mortality is noticed and in case of more than 1 cm in the thickness all died.

2) As for the falx sign, in the epidural hematoma with the falx sign the operative mortality was 31%, without the falx sign 40%, however in the subdural hematoma with the falx sign the operative mortality was 50%, in case without falx sign 70%.

3) In anterioposterior view, the more extensive shifting of anterior cerebral artery developed the higher operative mortality was noted, especially in the subdural hematoma, namely in 1–2 cm of the shifting contralaterally from the midline mortality was 83% and in case of more than 2 cm 100%. On the other hand in the epidural hematoma in case of 1–2 cm mortality was 25% and in more than 2 cm 33%.

4) All of intracranial hematoma which A line was lengthen had fatal course, which B line had no relationship to mortality.

5) As for the difference between H1 and H2 in length, in case of more than 2.5 mm the operative mortality was 32% in the epidural hematoma, and in the subdural hematoma 93%.