Of the enzyme therapy of head injury, cytochrome C has been used frequently. On the other hand, proteolytic enzymes are used only for the treatment of the subcutaneous edema or hematoma. However, it may be available to use in the non-surgical treatment of the extradural hematoma in light grade.

Acute extradural hematoma has been treated by craniotomy and evacuation of the hematoma. So called hematoma signs and symptoms, such as unconsciousness with mostly demonstrable lucid interval, anisocoria, motor palsy or pyramidal signs, vomiting etc., were encountered in the case of typical extradural hematoma. With recent advance of the neurosurgical examination, the diagnosis of intracranial hematoma has been more easily done even in atypical case which failed such hematoma signs or symptoms. We experienced an atypical case, 2 years of age female child, in 1965. She had the thin avascular area over the superior sagittal sinus extended from the frontal tip to the parietal region, which was found on venous phase of the carotid angiography. She treated only by antibiotics since she showed no neurological abnormality and the avascular area was less than 1 cm in thickness. Then second angiography was carried out 2.5 months later. Avascular area observing on parietal region remained, inspite of the frontal one disappeared during this period. This case demonstrates that the spontaneous absorption of extradural hematoma is difficult.

In our clinic the proteolytic enzymes has been used in such light case since 1966. Five cases were treated by these enzymes with favorable results. These enzymes, chymotrypsin, trypsin or bromelaine were administered simultaneously intramuscularly and per os during the first week, thereafter injection was ceased and the latter was continued from three to five weeks.

In general, severe headache, nausea, vomiting and vertigo complaining immediately after the trauma decreased gradually and disappeared during a week in most cases. The avascular area observing in acute stage disappeared usually about a month later, and no side effect was observed. Moreover, no abnormality was found on electroencephalography and on air study carried out after the treatment. Hence, the proteolytic enzyme treatment may be employed as preferable treatment of the light grade extradural hematoma.

144. Multiple Trephine Procedures for Intracranial Epidural Hematoma

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Clinical signs of epidural hematoma develop rapidly, so that the early