3) In 17 dogs experimental study on acute extradural compression (balloon method) was performed. In supratentorial extradural compression, thalamic pO₂ began to decrease when the cisternal pressure reached to 30 mmHg or higher. EEG flattening appeared in the range of 50 to 70 mmHg, then respiration ceased. In acute infratentorial extradural compression, the almost same critical level was found for decrease in thalamic pO₂. However, cardiovascular failure and respiratory depression may appear prior to EEG flattening.

These results may suggest the close correlation between clinical findings and experimental data in respiratory arrest due to increased intracranial pressure.

68. Postoperative Management by Prolonged Hypothermia in Brain Operations (The Second Report)

Kenzo Matsuoka, Toru Uozumi, Ryoichi Nozaki and Muneo Kazimura

The First Department of Surgery, Osaka University Medical School

Since 1960, 110 cases of intracranial tumors, aneurysms and severe head injuries were operated on under moderate hypothermia between 28°C and 30°C.

The prolonged hypothermia was employed in these postoperative course. This was maintained by surface cooling and administration of lytic cocktail.

A group of cases was operated on under ether anesthesia and the other was under fluothane anesthesia.

After the operation it was easy to maintain hypothermia in ether group than fluothane group.

Disturbance of consciousness due to hypothermia itself was not so significant. So called "replied response" in soporous state could be recognized under 32°C in many cases.

This response is a sign to start rewarming.