Clinical experience of autologous blood transfusion and fibrin glue in neurosurgery. [Japanese]

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Abstract:

Clinical experiences of autologous blood preservation on 83 patients and transfusion on 43 patients were reported. When drawing blood, 14 patients whose hemoglobin level was below 13 g/dl (body weight < 70kg) or 14g/dl (body weight > 70kg) received subcutaneous recombinant human erythropoietin injection (s.c.) to facilitate erythropoiesis, according to the internal standard protocol. Hemoglobin levels of all the patients recovered to more than 10g/dl by the time they were admitted to the hospital, which value would not interfere with general neurosurgical procedures. The injection of erythropoietin did not cause any side effects. Autologous blood transfusion was performed in 43 patients but, in 3 patients, additional homologous transfusion was required because of excessive bleeding. Except in cases with meningioma, postoperative hemoglobin values were identical with preoperative values, indicating that autologous blood transfusion was enough to replace intraoperative blood loss. Autologous fibrin glue was applied in 74 patients. In 70 cases including 55 with skull base surgery, the glue was applied to ensure dural closure. The incidence of cerebrospinal fluid leakage was 16.4% (5 patients) in skull base surgery. This incidence was identical to or less than that in previous reports. The glue was also effective in transposing and fixing offending vessels in 4 cases which received microvascular decompression. As a conclusion, procedures for autologous blood preservation and transfusion were safely performed in neurosurgical cases. Review of the literature was also presented to discuss the advantages and problems to be solved in the future.