Youth hypertension cerebral hemorrhage in basal ganglia surgery operation analysis

Qi-Hua Wang*, Da-Shuang Lu, Jie Cui, Bo-Lin Qiao, Jing-Chun Wang

Fengrun District People’s Hospital Neurosurgery, City of Tangshan, Hebei Province, 064000

ARTICLE INFO

Article history:
Received 8 Mar 2016
Received in revised form 18 Mar 2016
Accepted 12 Mar 2016
Available online 28 Mar 2016

Keywords:
The youth
High blood pressure
Cerebral hemorrhage in basal ganglia
Operation
Analysis

ABSTRACT

Objective: Discuss surgical treatment of youth hypertension cerebral hemorrhage in basal ganglia. Methods: Retrospective analysis from January 2012 to April 2015 were adopted to bone flap craniotomy decompression for removal of hematoma and drainage drilling two kinds of surgical treatment of 46 cases of young patients with hypertension cerebral hemorrhage in basal ganglia. Results: Surgical operation, 28 patients postoperative review head CT, no further hemorrhage cases, residual hematoma volume 2-6 mL. Drilling drainage in the treatment of 18 patients, 1 case was bleeding again given surgical operation to remove the hematoma and the rest of the 17 cases without bleeding again, after 3 d, 17 cases of patients of postoperative hematoma drainage thoroughly. After 6 months, 46 cases of patients with postoperative review, GOS score light disability 9 cases, moderate disability 33 cases, 4 cases were severely disabled, curative effect is satisfied. Conclusions: Two kinds of operative methods each have advantages and disadvantages, young patients with hypertension cerebral hemorrhage in basal ganglia should according to patients’ disease progression after speed, on admission patient's state of consciousness and head CT measured on admission hematoma volume, respectively.

1. Introduction

From January 2012 to April 2015 the surgical treatment of 46 cases of young patients with hypertension cerebral hemorrhage in basal ganglia, respectively adopted to bone flap craniotomy decompression for removal of hematoma and drainage drilling two kinds of operation, has obtained the satisfactory curative effect, now report as follows.

2. Clinical data

2.1 General data

A total of 46 cases of patients with male 42 cases, female 4 cases; Age from 22 to 44 years old, average 36.6 years old; Period 1-15 h, conscious to moderate coma; GCS grading score 5-14 points; Left basal ganglia hemorrhage parts 26 cases, 20 cases on the right side; Side pupil loose big 10 cases, bilateral pupils scattered in 1 case; Of 46 cases were bleeding the contralateral limb hemiplegia, aphasia, 10 case; The bleeding 30-80 mL, average 49.6 mL.

2.2 Surgical method

Immediately after the onset, loss of consciousness, 28 patients between light to moderate coma using bone flap craniotomy decompression for the treatment of hematoma removal, frontotemporal question mark shape incision, remove bone flap, remove the sphenoid ridge, cut open "H" shape and epidural hematoma within most located outside the front of capsule, the capsule forelimbs 8 cases with separated from the lateral side crack to the insula, the insula avascular area separated from about 1-1.5 cm long to hematoma removal; Most of hematomas in outer bag back, internal capsule hind legs 20 cases in the front of
the superior temporal gyrus cortex separately in the lateral crack direction is about 2-3 cm long, white matter separately inward to clear hematomata. Microscope electric coagulation artery bleeding, bleeding site attach hemostatic gauze, put a 10 model silicone tube in hematomata cavity, artificial epidural cut suture epidural, layered suture of the scalp. Progress slowly, after the onset of checks are awake-trance drainage treatment, 18 cases were treated by drilling in temporal scalp tag bone drill hole, review head CT, correction bone drill hole, observe whether continue to bleed. Intraoperative, a longitudinal incision on markers in the scalp is about 3 cm long, "cross-shaped" after bone holes epidural, scalp, skull, epidural, cerebral bleeding seriously, put drainage tube tip of model 12 in hematomata center, after the success of the catheter with a 5 mL syringe to take suction-stop-suction of intermittent pumping liquid and paste pulmonary hemorrhage, intraoperative out 10% -20% of all hematomata volume, urokinase 20000 IU dissolved in 5 mL saline injection, the drainage tube closed drainage, open drainage tube after 2 h. Each injection of urokinase in the morning and afternoon 1 times a day, after injection of 3-6 times, the residual hematomata volume less than 10 mL, pull out the tube.

3. Results

Surgical operation of 28 patients, after 12 h review head CT, no further hemorrhage cases, residual hematomata volume 2-6 mL. Drilling drainage in the treatment of 18 patients, 1 case of incomplete aphasia, irritability, blood pressure fluctuations, after 1 day of postoperative review head CT, residual hematomata volume > preoperative hematomata volume + drainage hematomata volume, gave the surgical operation to remove the hematomata, electric coagulation arterial hemorrhage, the rest of the 17 cases without bleeding again, 3 d of 17 cases of patients postoperative hematomata drainage thoroughly. Treatment of 46 patients from 13 to 30 d, averaged 17.3 d. No intracranial infection, 3 cases of pulmonary infection but quickly responded to treatment. After 6 months review, GOS score light residual 9 cases, 33 cases of moderate disability, 4 cases were severely disabled.

4. Discussion

Zhong cheng wang put forward hemisphere hematomata volume greater than 30 mL that surgical indications[1], this group of 46 cases of patients with cerebral hemorrhage in basal ganglia hematomata volume were greater than 30 mL, need surgery. From January 2012 to April 2015 46 cases of surgical treatment of young patients with hypertension cerebral hemorrhage in basal ganglia, in the same period 182 cases of surgical treatment in elderly patients with hypertension cerebral hemorrhage in basal ganglia, the ratio was 0.252; From January 2002 to April 2005 surgical treatment of young patients with hypertension cerebral hemorrhage in basal ganglia of 17 cases, in the same period 131 cases of surgical treatment in elderly patients with hypertension cerebral hemorrhage in basal ganglia, the ratio was 0.129, 10 years to the surgical treatment of young patients with hypertension cerebral hemorrhage in basal ganglia was markedly increased. Research has shown that young patients with hypertensive cerebral hemorrhage in basal ganglia early removal of intracranial hematomata, reduce hematomata on the surrounding brain tissue of oppression, can improve the prognosis, reduce the morbidity and mortality of the disease[2,3], in addition to 5 cases more than 7 h of stroke onset exceptions the group of 46 patients on admission are conform to the requirements of the super early surgery. Qijian etc. built surgery such as youth hypertension cerebral hemorrhage in 176 cases, except a few use the small bone window craniotomy, most line removal of bone flap craniotomy hematomata[4]. Zhang ning etc.surgical treatment of young patients with hypertension cerebral hemorrhage in basal ganglia 34 cases, emergency line of brain hematomata removal + standard big bone flap decompression[5]. This group of 46 patients were adopted respectively to bone flap craniotomy decompression for removal of hematomata and drainage drilling two kinds of operative methods.

Immediately after the onset, loss of consciousness in 28 patients, light to moderate coma, brain hematomata volume 42-80 mL, an average of 57.3 mL. Full, the young brain hemorrhage after cranial pressure high, frontotemporal top question mark shape incision, craniotomy to remove bone flap, remove the sphenoid ridge, "H" shape cut hard film, can quickly reduce intracranial pressure. Surgical approach according to the hematomata location, most of the hematomata located outside the front of capsule, internal capsule forelimbs were treated by separated from the lateral side of the crack to the insula, the insula avascular separate about 1-1.5 cm long to hematomata, on the way near. Once upon a time on the removal of hematomata under the convenient back under a microscope, can rapidly find the bleeding artery, giving an electrocautery unit of blood; Most of hematomata located outside, capsule, internal capsule forelimbs leg at the back of the patients in the superior temporal gyrus front along the direction of lateral fissure separated brain cortex is about 2-3 cm long, cerebral white matter separately inward to find hematomata, transform microscope angle will try to remove hematomata, general can be found in the process of removing hematomata bleeding artery, properly to stop the bleeding. 28 patients with surgical operation, intraoperative bleeding found bean grain arteries, microscope artery bleeding , compared with the middle-aged and old patients , the youngs with a light hardening of the arteries, bleeding quickly, but easy to an electrocautery unit of blood. 12 patients to break into the
ipsilateral lateral ventricle and the third ventricle, hematoma removal can find hematoma broken into the ventricle into place, gently wash with physiological saline, can remove part of the brain hematoma, placed the size of 10 drainage tube in intraoperative hematoma cavity, postoperative with hemorrhagic cerebrospinal fluid extract, can the residual hematom a drainage. The young brain tissue full, intraoperative suture epidural, reduction can be guaranteed through postoperative brain edema.

Progress slowly, after the onset, 18 patients in a awake-trance, brain hematoma volume 30-45 mL, an average of 37.6 mL, at the onset of 1-15 h, give drilling drainage treatment. Young people psychological pressure after onset, aphasia patients can’t communicate in the language, emotion, blood pressure fluctuations, surgery under general anesthesia, can prevent intraoperative bleeding again. Morbidity in patients with less than 6 h, to prevent intraoperative bleeding again, began operation in the onset of 6 h, after the success of the catheter with a 5 mL syringe can extract liquid or paste form old blood, in 1 h complete accord with the requirement of super early decompression surgery. Postoperative control of blood pressure, appropriate sedation, closely observing consciousness, pupil change, hematoma cavity injection of urokinase in the morning and afternoon every day, every day review head CT, if find new hemorrhage need surgical operation again, removal of hematoma, properly to stop the bleeding.

Frontotemporal top to bone flap craniotomy decompression for removal of hematoma can quickly reduce the intracranial pressure, thoroughly remove hematoma under a microscope, properly hemostatic, surgery should be 2-3 h, trauma, postoperative legacy skull is missing, after 3 months to repair of skull. Temporal catheter drainage drilling procedure takes 2/3-1 h, small trauma, intraoperative suction liquid and paste pulmonary hemorrhage, pulled out all the hematoma volume of 10%-20%, and can significantly reduce the intracranial pressure, but can't stop bean grain artery bleeding, postoperative need 1-3 d to put out brain hematoma derivation, gradually 1 cm in diameter skull is missing, do not need to repair. Two kinds of operative methods each have advantages and disadvantages, young patients with hypertension cerebral hemorrhage in basal ganglia should according to patients’ disease progression speed, on admission patient’s state of consciousness and head CT measured on admission hematoma volume, were used respectively to obtain satisfactory curative effect.

Reference