

## Supplemental Digital Content 1. Standard care bundle of intracerebral hemorrhage.

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### Standard care bundle of intracerebral hemorrhage

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#### General Monitoring

1. Take place in an intensive care unit or dedicated stroke unit.
2. Frequent vital sign checks, neurological assessments (National Institute of Health Stroke Scale and Glasgow Coma Scale), and continuous cardiopulmonary monitoring including a cycled automated blood pressure cuff, electrocardiographic telemetry, pulse oximetry probe and continuous intra-arterial blood pressure monitoring.
3. Prevention of complications of immobility through positioning, airway maintenance, and mobilization within physiological tolerance.
4. Monitoring of intracranial pressure and hemodynamic function (optional).

#### Surgical Treatment

1. Basal ganglia hemorrhage: (1) surgical indications: ① tentorial herniation; ② imaging obvious intracranial hypertension (midline structure displacement more than 5 mm; ipsilateral lateral ventricle compression occlusion more than 1/2; ipsilateral cerebral pools and sulci blurred or disappeared); ③ the actual measurement of the intracranial pressure > 25 mmHg. (2) surgical procedures and methods: ① bone flap craniectomy hematoma removing operation; ② small bone window craniectomy hematoma removing operation.
2. Thalamic hemorrhage: (1) surgical indications: refer to cerebral hemorrhage in the basal ganglia region. (2) surgical methods: ① all kinds of hematoma removal surgery: refer to basal ganglia cerebral hemorrhage; ② ventricular drilling external drainage.
3. Lobar hemorrhage: refer to cerebral hemorrhage in the basal ganglia region.
4. Ventricular hemorrhage: (1) surgical indications and surgical methods: ① small to moderate amount of hemorrhage, without obstructive hydrocephalus, could be treated conservatively or external lumbar drainage; ② large amount of hemorrhage, more than 50% of the lateral ventricle, combined with obstructive hydrocephalus, ventricular drilling external drainage; ③ large amount of hemorrhage, more than 75% of the ventricle or complete ventricular casts, and the intracranial hypertension is obvious, ventricular drilling and external drainage is feasible.
5. Cerebellar hemorrhage: (1) surgical indications: ① cerebellar hematoma >10 ml; ② fourth ventricle, brain stem compression or concomitant obstructive hydrocephalus. (2) Surgical method: subepicardial median or paramedian approach, bone flap craniotomy for hematoma removal.
6. Subarachnoid hemorrhage: etiologic treatment should be carried out as early as possible. Intracranial aneurysm is preferred to be treated by simple spring coil embolization, and microcatheter (guide wire) assisted, multi-catheter technology, balloon assisted or stent assisted could be reasonably chosen if there are difficulties.

#### Medical Treatment

##### Treatment of intracranial hypertension

Use of mannitol, glycerol fructose, albumin, diuretics, etc., with mannitol as the first choice, with a common dose of 1-4 g/kg/d.

##### Blood pressure management

Lowering systolic blood pressure to 140 mmHg, depending on the method of implementation of subgroup.

##### Acute agitation and/or acute blood pressure elevation management

For the event of acute agitation in the intervention group, the protocol specified the rapid administration of remifentanyl (0.2 µg/kg for 1 min) or propofol (0.3 mg/kg) to promptly alleviate the agitation. For recurrent episodes of agitation (three or more episodes), propofol was administered for maintenance sedation over a 6-hour period. In contrast, in the control group, where the use of remifentanyl and dexmedetomidine was restricted, propofol and midazolam were employed as the primary sedative medications. When a patient develops an acute blood pressure elevation without obvious triggers, intravenous antihypertensive medications will be rapidly administered while the maintenance infusion of dexmedetomidine and antihypertensives will be adjusted upward to maintain the target blood pressure.

##### Coagulation management

1. For coagulation factor deficiency and thrombocytopenia, give coagulation factor or platelet replacement therapy;
2. For oral anticoagulants, such as warfarin, discontinue such drugs and supplement with vitamin K, fresh frozen plasma and plasminogen complex to correct international normalized ratio;
3. Completion of thromboembolic risk screening and use of intermittent air compression devices on paralyzed limbs after vascular ultrasound has ruled out lower extremity venous embolism.

#### Glucose management

Daily monitoring, and avoid hypoglycemia or hyperglycemia.

#### Temperature management

The presence of fever should be treated and the goal of cooling is to keep the body temperature below 38°C and try not to go below 35°C.

#### Antiseizure drugs

People who have clinical seizures and those found to have seizures on electroencephalogram should be treated with antiepileptic drugs.

#### Nutritional support

Nutritional support should be given as early as possible to those who are at nutritional risk, which can be initiated within 24–48 h after the onset of the disease, and enteral nutrition is preferred in principle.

#### Complication prevention

1. Keeping the airway clear and clearing respiratory secretions in a timely manner.
  2. Routine application of histamine H<sub>2</sub> receptor antagonists or proton pump inhibitors.
  3. Reasonable fluid replacement and monitoring of electrolytes.
  4. Strict sterilization during indwelling urinary catheters, intravascular catheters.
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