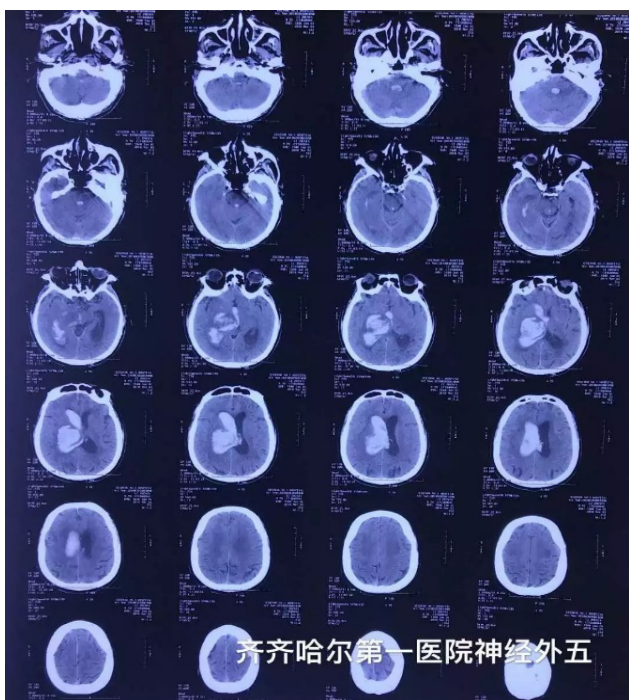


# Dr. Jianqi Xiao successfully treated a patient with cerebral hemorrhage breaking into the ventricle

A 69-year-old male patient suffered from hypertensive disease more than 10 years, suddenly fainted after getting up on 5th March, 2018. The patient presented with left-sided weakness, followed by a diminished level of consciousness and incontinence. After three hours, the ambulances took the patients to the first hospital of Qiqihar for emergency treatment.

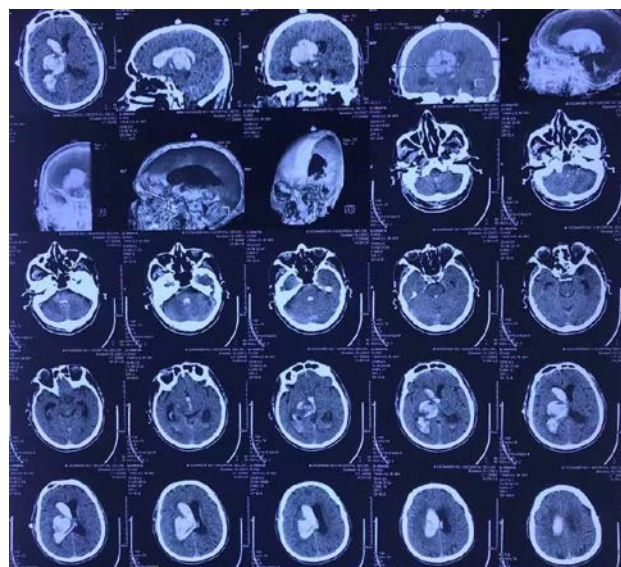
The emergency investigation of head CT revealed a high density mass (size: 17.02 cm<sup>3</sup>) in the right thalamus area. The right ventricle was compressed, and the middle line structure was shifted to the left. The hemorrhage broke into the ventricle, and shadows can be found in the right basal ganglia, the left thalamus, and bilateral corona radiate areas.



### Clinical preliminary diagnosis:

Cerebral hemorrhage in the right basal ganglia and breaking into the ventricles

After consideration, it is decided to perform a key-hole minimal invasive surgery under endoscopic visualization coupled with CCC, in order to achieve a minimal-damage, less-complication and effective-operation result.



Preoperative CT



Scalp incision



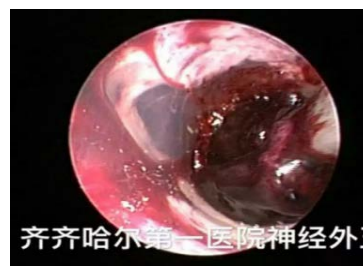
Head lifted 45° under general anesthesia



Open and remove a small (3 cm) bone window



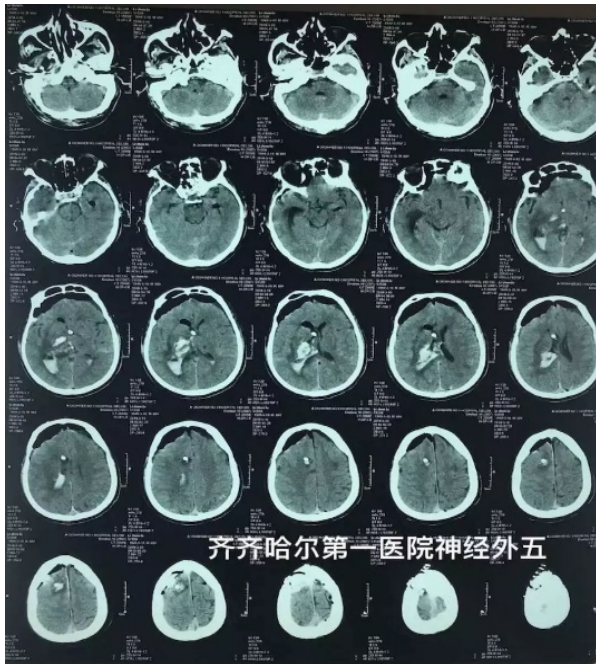
After softly dilated the brain tissue by the balloon, placed in the tube and built a safe surgical corridor, then clean the hemorrhage.



Blood clots were removed under endoscopic visualization



Restore the bone window



Postoperative CT revealed that most part of hemorrhage was cleaned. The patient regained consciousness on the first day after the surgery and able to move.

Advantages of endoscopic surgery comparing to conventional craniotomy:

1. Wide surgical perspective: The endoscope gives surgeons a lateral view which provides more visual view that microscopes cannot reveal. When the endoscope reaches the hematoma area, surgeons can obtains a panoramic view to identify the important nerves and blood vessel structures surrounding the hemorrhage. Also, it provides good illumination for deep areas, so the chance of surgical damage caused by darkness will be less. Thus it greatly increases the accuracy and safety of the surgery and improves the quality of surgery.

2. Small trauma: The endoscope is a slender cylinder that is suitable for operating in a narrow cavity, which achieved the purpose and requirements of minimally invasive surgery.

3. Short operation time: For some diseases, endoscopic surgery can simplify the surgical procedure and shorten the operation time compared with conventional neurosurgery. It will bring less adverse reactions and better recovery results to the patients, also save more money because of short hospitalization.