



INTERNATIONAL FEDERATION OF NEUROENDOSCOPY IFNE

VII WORLD CONGRESS OF NEUROENDOSCOPY

The Westin Resort & Spa Puerto Vallarta

November 1st to 4th, 2015



SOCIEDAD MEXICANA DE
CIRUGÍA NEUROLÓGICA, A.C.

SINGLE-PORT ENDOSCOPIC TECHNIQUE FOR THE TREATMENT OF PRIMARY INTRACEREBRAL HEMORRHAGE

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INTRODUCTION

Intracerebral hemorrhage accounts for 10-15% of cerebrovascular disease and is associated with increased morbidity and mortality. Intracerebral hemorrhage is considered a neurosurgical emergency, but to date there is no general agreement on the selection of the type of treatment for these patients, especially in the case of supratentorial hematomas.



Fig.1 Most common sites of intracerebral hemorrhage.

OBJECTIVE

Analyze outcome, morbidity and mortality between three different types of treatment for supratentorial primary intracerebral hemorrhage.

MATERIALS AND METHODS

A retrospective case series with the diagnosis of primary supratentorial intracerebral hemorrhage were analyzed. Three different treatments were compared: medical management and observation, hematoma drainage through a single-port (endoport) with endoscopic assistance and drainage through a conventional craniotomy.



Fig.2 Craniotomy and endoport introduction.

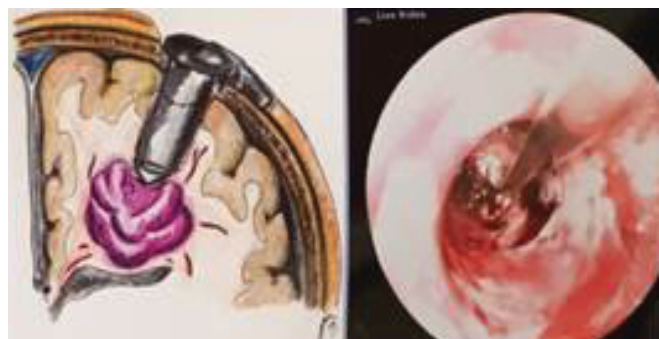


Fig.3 Endoscopic view of the drainage of the hematoma.

RESULTS

Clinical and radiological records of a total of 64 patients were analyzed, of whom 60.9% were men. The average age was 52.7 years (range 22-84 years). Medical treatment group was used in 28 patients, conventional craniotomy in 24 patients and single-port treatment in 12 patients. Hypertension was the main risk factor for the primary intracerebral hemorrhage. The main symptom was headache. The largest volume of bleeding was found in the endoport group with 66.3 cm³. The medical treatment group had more patients with a deep intracerebral hemorrhage (basal ganglia of thalamus/60.7%), while the craniotomy group had more patients with a lobar hemorrhage (70.8%). Complete drainage of the hematoma was achieved in 83.3% of cases from the endoport group. Patients treated using the endoscopic endoport technique had an average hospital stay of 8.08 days, with a statistically significant difference against the other two groups ($p = 0.003$). Mortality at 6 months had a significant difference between the medical treatment group and the endoport group, 42.9% vs. 0%, respectively ($p = 0.02$).

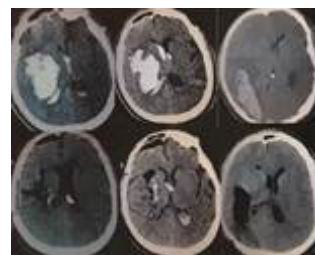


Fig.4 Preoperative (superior) and posoperative (inferior) CT of three different patients operated by endoport technique.

CONCLUSIONS

Treatment using the endoscopic single-port technique offers lower morbidity and fewer days of hospital stay in the management of primary supratentorial intracerebral hemorrhage

REFERENCE

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