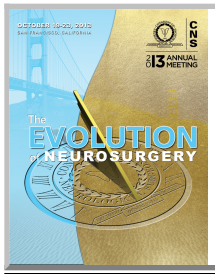

Decompressive Craniectomy with Lattice Duraplasty: A Study on Intracranial Pressure and Imaging Features

Dongxia Feng MD; J.D. Day

Introduction

To investigate the alteration of intracranial pressure and imaging features after decompressive craniectomy with lattice duraplasty in severe head injured patients with intracranial hypertension.

Methods

One hundred twenty three patients suffered from severe head injury with intracranial hypertension underwent decompressive craniectomy using lattice duraplasty technique. The pre- and post-operative ICP and imaging features were observed and recorded, followed by a statistical comparative study. A controlled group consisted of 130 patients underwent decompressive craniectomy using routine technique was also established, and the occurrence rates of external cerebral herniation were compared between two groups.

Results

The preoperative ICP was 37.6±7.9mmHg, the midline shift was 11.7±3.8mm, the patients with open ambient cistern were 7 cases. The postoperative ICP reduced to 14.1±6.3mmHg, the midline shift decreased to 4.6±2.7mm, and the patients with open ambient cistern were 86 cases. Compared with preoperative data all postoperative data were improved significantly ($P<0.01$). Postoperative CT presence of external cerebral herniation in lattice duraplasty group was only 6 cases (4.8%), which was significantly lower than that in controlled group (38 cases, 29.2%) ($P<0.01$)

Conclusions

Decompressive craniectomy with lattice duraplasty can effectively alleviate intracranial hypertension, ameliorate midline shift and ambient cistern compression, most importantly it can significantly decreased the occurrence rate of external cerebral herniation.

Learning Objectives

1.Describe the technique of lattice duraplsty in decompressive craniectomy for patients with intracranial hypertension.

2.Elucidate the clinical significance of lattice duraplasty in decompressive craniectomy for severe head injured patients with intracranial hypertension.

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