



The Role of Telovelar Approach in Fourth Ventricular Surgery: A New Perspective

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Introduction

The aim of this study is to evaluate the efficiency and safety of the telovelar approach for removing 4th ventricular lesions through identifying and preserving important neurovascular structures.

Methods

Patients and methods: This is a combined retrospective and prospective study on forty children (=12 years) suffering from fourth ventricular tumors using the telovelar approach from 2006-2013

Results

Results: This approach provided adequate exposure in all cases and the narrow working angle was efficiently compensated by changing the angle of the microscope and operating table. Potential tumor attachment was observed at the floor of the fourth ventricle in twenty two (55%) cases. Out of brain stem cases which constitute five cases , 16 of the remaining 17 cases (94%) had focal attachment at any area of the caudal fourth ventricular floor e representing an inverted triangle with the obex inferiorly and the level of lateral recesses bilaterally and two cases (11,7%) was attached at any area of the lateral aspect of the rostral fourth ventricular floor which was the only point point of attachment in one of them .

Conclusions

Conclusions: The main advantage of the telovelar approach is the early identification and preservation of the brain stem and PICA and in addition it allow for assessment of potential tumor attachment at the aforementioned areas. The pathological nature of the tumor and the degree of brain stem infiltration were the key factors that determined the degree of tumor excision.

Learning Objectives

enhance safety and efficiency of fourth ventricular tumour surgery

References

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