



OUTCOME OF RADICAL SURGERY IN ADULT CRANIOPHARYNGIOMAS

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Introduction

Craniopharyngiomas (CPs) are rare and mostly benign epithelial disembryogenic tumors that mostly present in children (1,3,4,5). A less numerous adult group can be found by the fifth to seventh decades of life (10). There are two recognized histological variants of CPs, the adamantinomatous type is more prevalent in children while the papillary type is almost exclusively found in adults (2,3). Based on the reduced number of published series dealing with this pathology in adults, studies in this age group gain importance based on two main facts, the low number of cases and the possible differences emerging from a mostly different histological type.

Methods

Retrospective review of 153 adult patients with CPs treated surgically in our center between January 1985 and December 2009.

Results

Transcranial approaches were used in 84% of the cases. Gross Total Removal (GTR) was achieved 30.46% of patients, Near Total (NTR) in 21.85%, Subtotal (STR) in 15.23% and Partial (PR) in 19 (12.58%). Follow-up time ranged from 4 to 164 months (mean, 56 months). Tumor relapse was significantly less frequent after GTR (5 of 46, 10.86%) than after NTR or STR with or without radiotherapy (RT) (23 of 56, 41.07%) (P < 0.01). Overall rate of surgical complications was 15.6%. The overall rate of new endocrinopathies for all patients undergoing surgery was 37.25% (95% CI = 33.9–41.2). Hormonal postoperative deficiencies of TSH and ACTH were both the most clinically significant and the most frequently found (67% and 70.5%, respectively). **Figure 1A and B.**

Local Control (LC) at 5, 10, 15 and 20 years for the entire cohort was 78, 72, 70 and 65%, respectively. We found the extent of surgical removal was closely associated with rates of recurrence. Tumor relapse was significantly less frequent after GTR (5 of 46, 10.86%) than after NTR or STR (23 of 56, 41.07%) (P < 0.01).

Overall Survival (OS) at 5, 10, 15 and 20 years was 96.5, 93, 89.5 and 87%, respectively. We found significant higher OS rates at 5, 10, 15 and 20 years for group STR/PR (conservative resection) when compared to GTR/NTR (radical resection).

Figure 1C

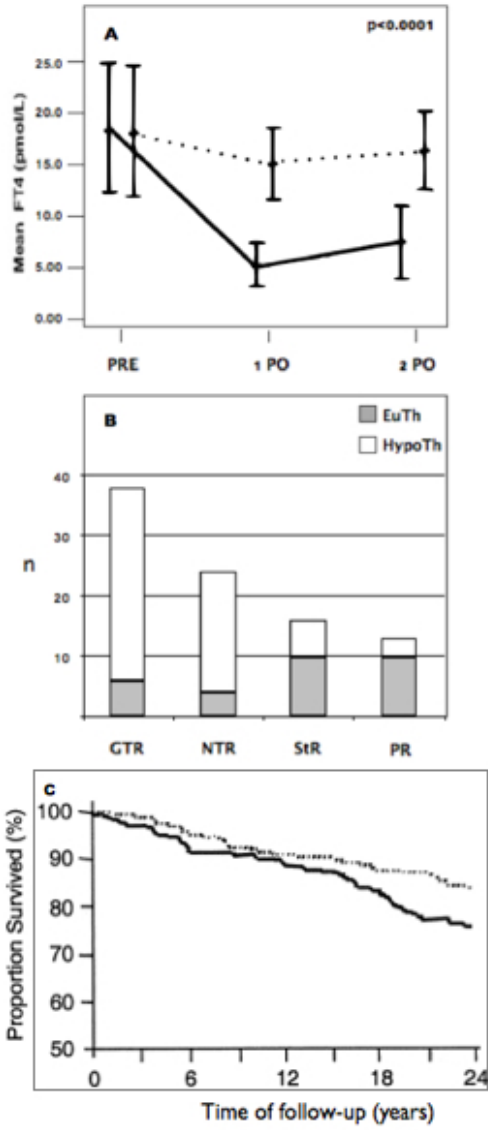
Conclusions

Although we were able to establish significant higher rates of local control for GTR and NTR during long-term follow up, tumor control was not necessarily related to better OS rates. By contrast, higher rates of tumor removal (GTR and NTR group) were significantly associated to less rates of OS. After reviewing our unacceptable high number of endocrine complications resulting from radical surgical strategies we concluded subtotal resection with adjuvant radiotherapy could serve as a desirable replacement for GTR when tumor remnants are located on critical structures or disease progression is documented after surgery. Previous results in children have shown that subtotal resection with adjuvant radiotherapy can serve as a desirable replacement for GTR when tumor remnants are located on critical structures or disease progression is documented after surgery. In this retrospective study involving a large cohort of exclusively adult patients with CPs treated with variable degrees of tumor resection, we were able to demonstrate that this premise could also have value in adult patients.

References

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Surgical impact on HPT axis and effect on OS



A. Free T4 concentrations (mean ± SD). B. Comparison of long-term postoperative euthyroidal (EuTh) versus hypothyroidal (HypoTh) patients. C. Long-term OS