

Boston Children's Hospital - Harvard Medical School

Introduction

- Pediatric craniopharyngioma is a rare tumor which is considered benign in nature. However, It's associated with significant long-term morbidities. Management and outcomes remain controversial.

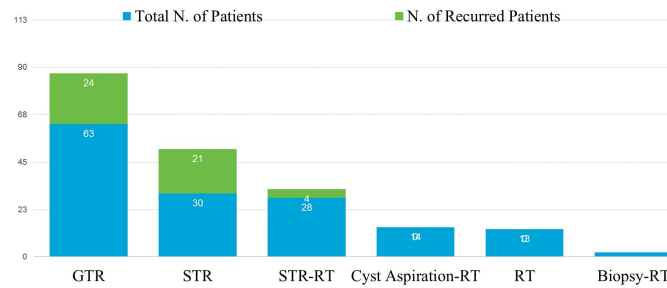
Methods

- Retrospective analysis of all pediatric patients who were diagnosed with craniopharyngioma at Boston Children's Hospitals (BCH) between 1980 and 2017. We reviewed all of the clinical data, operative notes, pathological diagnosis, complications and long-term outcome. IRB was obtained.

Results

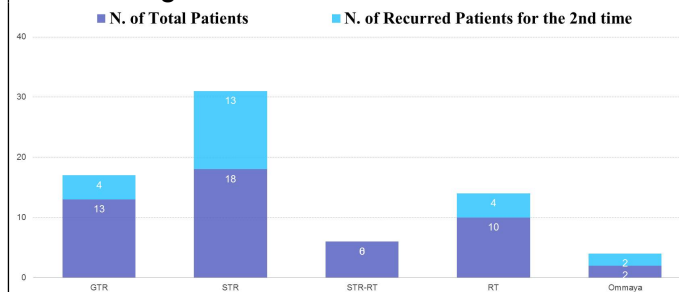
- There were 150 patients - 78 males and 72 females. The median age at time of presentation is 8.2 years and the range is 19 (1-20) years. The median follow up is 9.2 years and the range is 33.5 (0.5 - 34) years.
- 115 patients presented with headaches, 87 presented with visual impairment (6 of them were unilaterally blind and two were completely blind), 64 presented with endocrinopathies and 24 patients presented with high ICP.
- As regard the long-term outcomes, 50 patients experienced hypothalamic obesity (26 of them were morbidly obese), 135 patients had post-operative panhypopituitarism and diabetes insipidus and 15 patients had new onset blindness (8 of them were completely blind).
- As regard post-radiation long term complications, 73 patients had been irradiated and only 9 patients had moyamoya and 4 patients had secondary malignancies (2 GBM and 2 meningiomas).

Management at Time of Presentation - N: 150



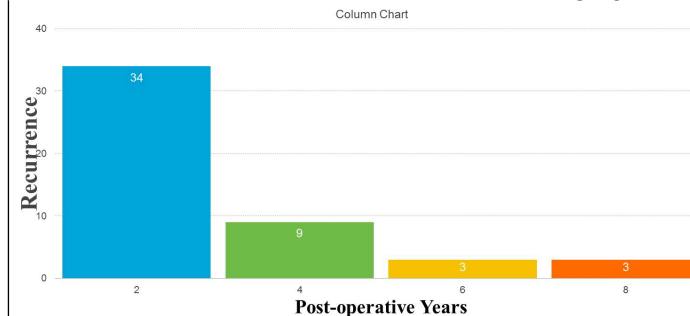
This graph shows that GTR was achieved in 63 patients (24 recurred), STR was achieved in 30 patients (21 recurred) and STR with adjuvant radiation were achieved in 28 patients (4 recurred)

Management at Time of Recurrence - N: 49

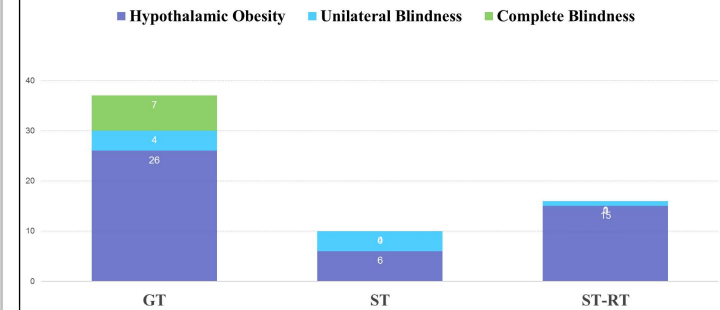


This graph shows that GTR was achieved in 13 patients (4 recurred), STR was achieved in 18 patients (13 recurred), 10 patients recieved radiation only (4 recurred) and STR with adjuvant radiation was achieved in 6 patients with no recurrence

Time of Recurrence in Relation to Surgery



Initial Management-associated Morbidities



This graph shows that GTR is associated with the highest rate of hypothalamic obesity and blindness

Conclusions

- GTR is associated with high risk of recurrence and significant long-term morbidities. So, it's not considered as the golden standard anymore.
- Hypothalamic obesity, blindness and endocrinopathies have significant impact on QOL.
- Radiotherapy is not associated with high risk of radiation-induced vasculopathies and 2ry malignancies as previously thought.
- The highest chance of recurrence is in the 1st two post-operative years.
- Since our management strategies aim for better QOL, Our recommendation is doing STR with adjuvant radiation as the standard way of management rather than aggressive GTR.