Outcomes in Agressive Multi-Modality Treatment of Hemangiopericytoma

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Introduction

Hemangiopericytomas (HPC) are mesenchymal tumors with a propensity towards chronicity and metastasis. This study aimed to reflect a single institution experience with both World Health Organization (WHO) grade II and III HPCs.

Methods

Pathology records from the years 2000-2012 at the University of Washington were searched to identify tumors unequivocally classified as HPC. Electronic chart review was then utilized to collect pertinent patient data. IRB approval was obtained prior to any data collection and analysis.

Results

Of the WHO grade II HPCs, there were 4 males and 2 females (Average age 52) while the grade III HPCs had 8 males and 2 females (average age 51). Sixty-six percent of WHO grade II tumors were located in the middle or posterior fossa as compared to none of the grade III tumors. Complete radical resection occurred in 40% of grade III tumors and only 16% of the grade II HPCs. The remainder were subtotally resected in both groups.

80% +/- 16% of grade II tumors and 60% +/- 16% of grade III tumors completed fractionated radiation therapy (p = 0.18). Of note, 50% of radiated tumors progressed in the grade II group while 66% of the radiated grade III tumors progressed (p = 0.38).

Significantly, 40% of WHO grade III tumors succumbed to disease at an average follow-up of 6.4 years while none of the grade II tumors did(p <0 .05). The number of recurrences did not vary significantly with 1.5 +/- 0.5 in the HPC II group and 2.8 +/- 0.85 in the HPC III group. All cases of radical resection went on to never have a recurrence.

Conclusions

Our results indicate that hemangiopericytomas are tumors with limited response to radiation. Increased mortality is seen in grade III tumors. Radical resection appears to confer the most benefit, regardless of grade.

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Learning Objectives

1. Establish that radical resection should be the primary goal in patients with hemangiopericytoma

2. Establish that radiation may have limited benefit in the treatment of patients with hemangiopericytoma