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Editorial Introduction

On December 15–17, 1995, a symposium entitled, Brainstem Tumors of Childhood: Have We Made Progress? was hosted by the Division of Pediatric Neurosurge-ry at NYU. National and international authorities on brainstem gliomas presented invited manuscripts about these tumors. In this issue of *Pediatric Neurosurgery* and in additional issues during the coming year, manuscripts will be published which were presented at the meeting. The manuscripts have undergone editorial review by the three of us, reviews similar to those of other manuscripts submitted to this journal. Manuscripts which will be published will merit publication according to the customary standards of *Pediatric Neurosurgery*.

The course addressed the question of whether progress has been made in our understanding and treatment of brainstem gliomas, given the advances during the past decade in neuroimaging, surgical expertise, radiotherapy techniques and chemotherapy agents. One of the main goals of the conference was to identify brainstem tumors that are amenable to surgery and those that are more appropriately treated by other modalities.

Four manuscripts from the conference are published in this issue. In the first article, ‘Radiologic Classification of Brainstem Tumors: Correlation of MR Imaging Appearance with clinical Outcome’, Fischbein and her coauthors confirm the heterogeneous MR appearance of brainstem gliomas and the prognostic importance of MR features such as focality and location. They clarify the role of gadolinium enhancement and present an MR classification of brainstem gliomas into six groups, based primarily on site and focality.

In ‘Practical Decisions in the Treatment of Pediatric Brainstem Tumors’, Epstein and Constantini summarize the role of operations for children with brainstem gliomas. Epstein and his associates, along with others, have suggested the concept that brainstem gliomas are a heterogeneous group of tumors, with widely differing prognoses, and they have developed surgical criteria which fit the clinical, MR and prognostic features. In their opinion, operations are always indicated for cervicomedullary tumors, cystic astrocytomas and dorsally exophytic tumors, never indicated for diffuse pontine tumors and sometimes indicated for focal medullary tumors. They advocate a policy of operating on focal low-grade brainstem gliomas before there is significant disability. They report that tumors at the cervicomedullary junction are always amenable to radical removal. They present details of their technique for removing intramedullary tumors, such as the safety of coagulating small dorsal vessels in the course of resecting tumors in the cervicomedullary junction.

The lack of correlation between histology and outcome has confounded many investigators. In ‘Pathology of Brainstem Astrocytomas’, Peter Burger makes the point that ‘low-grade astrocytomas’ in the brainstem vary widely in their prognosis, since they can either be fibrillary, with an ominous prognosis, or JPAs, with an excellent prognosis. He reviews the pathology of brainstem astrocytomas in various sites and observes that fibrillary astrocytic tumors usually enhance only when they are high grade.

Furnari et al. in ‘Molecular Biology of Malignant Degeneration of Astrocytomas’ summarize the substantial progress made in determining the numerous molecular genetic alterations which occur in astrocytomas of various grades, and the correlation of those alterations with prognosis.

It is our hope that the presentation of these articles will demonstrate that some progress has been made in pediatric brainstem gliomas, that children will receive more rationale care, and that areas needing further study will be identified.