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Intracranial Subependymoma - A SEER Analysis 2004-2013

Ha Nguyen MD; Ninh Doan MD PhD; Michael Gelsomino; Saman Shabani BS MD
Medical College of Wisconsin

Introduction

Subependymoma are rare, slow-growing, benign tumors. Due to its scarcity, knowledge relating to survival remains lacking. Consequently, we explore the SEER database to evaluate prognostic / treatment factors associated with intracranial subependymoma.

Methods

With the SEER-18 registry database, information from all patients diagnosed with intracranial subependymoma from 2004 to 2013 were extracted, including age, gender, race, occurrence of surgery, extent of primary surgery, receipt of radiation, tumor size, and follow-up data. Age-adjusted incidence rates, overall survival (OS), and cause-specific survival (CSS) were calculated. Cox proportional hazards model was employed for both univariate and multivariate analyses.

Results

A total of 466 cases were identified. The overall incidence of intracranial subependymoma is 0.055 per 100,000 person-years [95 % confidence interval (CI) = 0.05-0.06]. Through multivariate analysis, age < 40 [hazards ratio (HR) = 0.21, p = 0.03], female gender [HR = 0.34, p = 0.03], location within ventricles or near brainstem [HR = 0.49, p = 0.04], and ocurrence of surgery [HR = 0.50, p = 0.02] were significant independent positive prognostic factors. Receipt of radiation did not show a significant relationship.

Conclusions

Clinical factors such as younger age, female gender, and location within ventricles or near brain stem demonstrated positive relationship with overall survival. For treatment options, surgery remains a mainstay option. No support for radiation therapy was identified.

Learning Objectives

Learn epidemiology of intracranial subependymoma

Selected References

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