Perubahan laju pertumbuhan tumor pasien meningioma sebelum dan sesudah Gamma Knife Radiosurgery di RSUPN Dr. Cipto Mangunkusumo = Patients' meningioma growth rate pre and post Gamma Knife Radiosurgery at Cipto Mangunkusumo General Hospital

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Abstrak

Latar Belakang
Peningkatan insiden setiap tahun menjadikan meningioma sebagai salah satu masalah primer tumor jinak sistem saraf pusat (54,5%), dengan karakteristik laju pertumbuhan dan rekurensi tinggi. Maka, diperlukan penetapan rangkaian tatalaksana meningioma yang efektif dan efisien, dengan mempertimbangkan faktor pasien, lokasi tumor, volume, dan riwayat medis.
Metode
Penelitian menggunakan pendekatan studi potong lintang deskriptif-analitik untuk mengamati luaran radiologis meningioma pasca-GKRS. Digunakan data rekam medis pasien meningioma dari tahun 2018 hingga 2023 berupa MRI follow up satu tahun pasca- GKRS. Selain penyajian data pasien meningioma pasca-GKRS secara deskriptif, dilakukan analisis data laju pertumbuhan meningioma pasca-GKRS terhadap volume awal, lokasi, dan riwayat tindakan pra-GKRS.
Hasil
Dari 50 data rekam medis, sebanyak 44% tumor alami regresi; 44% tumor ukuran stabil, dan 12% tumor mengalami peningkatan ukuran. Mayoritas pasien meningioma pasca- GKRS berjenis kelamin perempuan, berusia 46 – 59 tahun, memiliki lokasi tumor supratentorial, volume awal 30 cc, dan tanpa riwayat tindakan pra-GKRS. Tidak ditemukan adanya hubungan bermakna antara laju pertumbuhan meningioma pasca-GKRS terhadap volume awal, lokasi, maupun riwayat tindakan pra-GKRS. Kesimpulan
Laju kontrol pertumbuhan tumor meningioma mencapai efektivitas 88% dalam jangka satu tahun pasca-GKRS. Tidak didapatkan hubungan bermakna antara volume awal, lokasi meningioma, maupun riwayat tindakan pra-GKRS terhadap luaran laju pertumbuhan tumor tertentu.
.....Introduction
Increasing incidence of meningioma every year makes it one of the primary problems of benign tumors of the central nervous system (54.5%), with characteristics of high growth rate and recurrence. Therefore, it is necessary to determine an effective and efficient management of meningioma by considering patient factors, tumor location, volume, and medical history. One of the newest meningioma treatment modalities in Indonesia is Gamma Knife Radiosurgery, a minimally invasive radiation surgery. Although it has been implemented since 2018, there are no studies analyzing the outcomes of Gamma Knife treatment for meningioma patients at RSUPN Dr. Cipto Mangunkusumo.
Method
The study used a descriptive-analytic cross sectional study approach to observe the radiological outcomes of meningioma after Gamma Knife. Medical record data of meningioma patients from 2018 to 2023 in the form of MRI follow-up one year after GKRS was used. In addition to descriptive presentation of Gamma Knife meningioma patient data (age and gender), significance tests of meningioma control rate after Gamma

Knife have been analyzed towards the initial volume, location, and medical history prior to GKRS.

Results

Of the 50 medical records, 44% had regression, 44% had stable size, and 12% had increased size. The majority of GKRS meningioma patients were female, aged 46 - 59 years, had supratentorial tumor location, initial volume 30 cc, and no history of pre- GKRS treatment. There was no significant relationship between meningioma control rate after GKRS and initial volume, location, or history of pre-GKRS treatment.

Conclusion

The meningioma tumor growth control rate reached 88% effectiveness within one year after Gamma Knife. There was no significant association between initial volume, meningioma location, or history of pre-GKRS treatment on the trend of specific tumor control rate outcomes.