Limbic Tumor of the Temporal Lobe

Classification

see Schramm classification.

Limbic tumors are categorized according to Yaşargil's classification into:

(1) Temporal mediobasal tumor.

(2) insular-temporo-opercular (I-TO) (see Insuloopercular glioma)

(3) fronto-orbital-insular-temporopolar (FO-I-TP).

A total of 50 cases with a mean age at diagnosis of 38 ± 19.9 years (14 women, 36 men) were included. Pathologic diagnoses were as follows: 20 anaplastic astrocytomas, 11 gangliogliomas, 8 astrocytomas (World Health Organization grade II), 3 pilocytic astrocytomas, 2 dysembryoplastic neuroepithelial tumors, 2 oligodendrogliomas (grade II), 2 anaplastic oligodendrogliomas, 1 low-grade glioneuronal tumor, and 1 atypical extraventricular neurocytoma. In all, 36 tumors were limbic and displayed consistent growth patterns (16 mbT, 11 I-TO, 8 FO-I-TP, and 1 pantemporal) and 14 were extralimbic. There were no differences between limbic and extralimbic tumors with regard to age, sex, pathologic diagnosis, and presentation with seizures. mbT tumors had more frequent neuronal differentiation (50 %) than I-TO (0 %) and FO-I-TP (25 %) tumors (chi-square = 7.8, df = 2, $p = 0.02$). Neuronal differentiation correlated with lower grade ($r = 0.52$, $p < 0.01$) and younger age ($r = 0.52$, $p < 0.01$).

Limbic tumors displayed consistent growth routes. mbT limbic tumors had more frequent neuronal differentiation, which may result from proximity to the neurogenic subgranular zone of the hippocampus. Neuronal differentiation was maximal in mbT and lowest in I-TO and FO-I-TP tumors and correlated with lower tumor grade and younger age at diagnosis [1].

1)
Capizzano AA, Kirby P, Moritani T. Limbic Tumors of the Temporal Lobe: Radiologic-Pathologic Correlation. Clin Neuroradiol. 2014 Jan 29. [Epub ahead of print] PubMed PMID: 24474261.