Insular oligodendroglial tumor

It has been reported that oligodendroglial tumors arising in the insula rarely harbor codeletions of chromosomes 1p and 19q, a molecular signature which is associated with a good prognosis and increased responsiveness to radiation and chemotherapy compared with tumors in which 1p and/or 19q is intact.

Wu et al. analyzed a series of insular oligodendroglial tumors in order to determine the frequency of 1p/19q co-deletion in tumors arising in this region. They identified 14 insular cases operated on after 2003 in which testing for losses of 1p and 19q was performed. Of these cases, co-deletion of 1p and 19q occurred in eight (57%). Four (50%) of eight oligodendrogliomas and four (67%) of six oligoastrocytomas demonstrated 1p/19q co-deletions. Seven of the eight tumors with co-deletion of 1p/19q were WHO grade II gliomas. There were no statistical differences between tumors with 1p/19q co-deletion compared to those with 1p and/or 19q intact in terms of age, preoperative KPS, presenting symptoms, left versus right lateralization, tumor location (purely insular versus extension into frontal or temporal lobe), preoperative tumor size. There was a preponderance of females in the co-deletion group, and a greater average extent of resection. In contradistinction to previous reports, loss of 1p/19q occurs commonly in insular oligodendroglial tumors. With respect to 1p/19q, insular gliomas do not appear to be distinct from gliomas arising elsewhere in the brain [1)].

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Wu A, Aldape K, Lang FF. High rate of deletion of chromosomes 1p and 19q in insular oligodendroglial tumors. J Neurooncol. 2010 Aug;99(1):57-64. doi: 10.1007/s11060-009-0100-5. Epub 2009 Dec 25. PubMed PMID: 20035368; PubMed Central PMCID: PMC2891585.