Glioblastoma with Probable Intratumoral Adenocarcinoma Metastasis: A Rare Report with Review of Literature

Aditi Goyal [1], Shilpa Rao [1], Dhananjaya I Bhat [2], Vani Santosh [1]

Affiliations
PMID: 38378180   DOI: 10.1177/10668969241231979

Abstract

"Tumor-to-tumor metastasis," an uncommon phenomenon, refers to a primary tumor metastasis into another tumor, with the most frequent donor being lung carcinoma and common recipients being renal cell carcinoma and meningioma. Tumor-to-tumor metastasis occurring in gliomas is rare with less than 20 reports described so far, and that into a glioblastoma is even rarer. We report a 54-year man, diagnosed with glioblastoma, IDH-wildtype, with metastasis of an adenocarcinoma into it. On histomorphology, the glial component was composed of astrocytic cells and showed increased mitosis, microvascular proliferation, and focal necrosis. This was intermingled with an adenocarcinomatous tumor with pleomorphic epithelial cells in glands, nests, and sheets. On immunohistochemistry, the adenocarcinomatous areas were positive for AE1/AE3 and TTF1 but negative for glial markers, ruling out adenoid glioblastoma. Further cytogenetic analysis showed EGFR amplification in the glial component but not in the adenocarcinoma component, ruling out glioblastoma with true epithelial metaplasia, and supporting the diagnosis of adenocarcinoma metastasis into glioblastoma. Glioblastomas may be susceptible to intratumoral metastasis due to the proliferating leaky vascular channels, however, the short survival of patients with glioblastoma may be responsible for the rarity of this occurrence. The documentation of these tumors is important as they may be important for clinical diagnosis and further treatment and prognosis.

Keywords: adenoid glioblastoma; glioblastoma; glioblastoma with true epithelial metaplasia; tumor-to-tumor metastasis.

PubMed Disclaimer