Metastatic prostatic adenocarcinoma with neuroendocrine differentiation to meningioma.

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Abstract

The diagnosis of a tumor-to-tumor metastasis in the central nervous system most commonly involves metastasis to a meningioma. These combined lesions are often radiographically unsuspected and mimic a meningioma. Most commonly, the source of metastatic disease are carcinomas from the lung and breast. To our knowledge, fewer than a half dozen cases of metastatic prostatic adenocarcinoma to a meningioma have been documented in the literature. This report documents a 67-year-old man who presented with worsening confusion and altered mental status, accompanied by symptoms of increased urinary frequency, incontinence, and difficulty urinating. Imaging revealed a mass at the base of the bladder and an intracranial lesion, surrounded by edema, which was initially suspicious for intracranial metastasis of prostate cancer. Due to worsening neurological symptoms, the patient underwent craniotomy to remove the intracranial mass. The mass was comprised of a meningothelial meningioma, World Health Organization Grade I, accompanied by atypical epithelioid cells which demonstrated immunoreactivity to prostate specific antigen, chromogranin and neuron specific enolase antibodies, consistent with a metastatic prostatic adenocarcinoma with neuroendocrine differentiation. The patient suffered severe neurological complications post-operatively, developed multiple metastases and expired 12months later. The report reviews current theories as to why meningiomas are the most common host tumor for tumor-to-tumor metastases in the brain and reviews the literature on previously reported cases involving metastatic prostatic adenocarcinoma.

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KEYWORDS: Brain tumor; Meningioma; Metastasis; Prostatic adenocarcinoma; Tumor-to-tumor metastasis

PMID: 27503809 DOI: 10.1016/j.jocn.2016.06.004

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