Miliary Metastatic Tumors

To The Editor: The recent article by Dr. Bhushan (Bhushan C: “Miliary” metastatic tumors in the brain. Case report. J Neurosurg 86:564–566, March, 1997) gives a detailed description of “an extremely unusual metastatic tumor.” We were surprised to see that the author does not mention any of the small number of published cases of miliary brain metastases, although they are relevant and bear many similarities to his case. Dr. Bhushan states that “A review of the literature yielded only three reported cases of miliary metastases of the brain” and that they “have been unable to find cases in the literature of such diffuse and innumerable metastatic lesions in the brain, except three cases of calcified metastases.” We would like to draw attention to two additional cases of noncalcified miliary metastases without surrounding edema. In 1951, Madow and Alpers described multiple carcinomatous nodules in the brain, which they referred to as “encephalitic metastatic carcinoma.” Radiologists used the term “carcinomatous encephalitis” for the same condition and pointed out that the multiple tumor nodules usually lack perifocal edema and are nonenhancing on computerized tomography scans. We recently described a patient with miliary brain metastases from malignant melanoma that also lacked edema and contrast enhancement on computerized tomography scans. Although we agree with Dr. Bhushan that the survival of patients with miliary brain metastases is poor, it seems that noncalcified and nonenhancing metastatic nodules prevail over calcified ones and appear to arise predominantly from small cell lung cancer and malignant melanoma.

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References

RESPONSE: I appreciate the comments of Drs. Rainov and Burkert on my recent article; they have further enlightened me on miliary metastatic tumors of the brain. Of the four references mentioned in their letter, the first, second, and third were published under the heading “carcinomatous encephalitis.” My computerized literature search did not include “carcinomatous encephalitis” because I was looking for miliary metastatic tumors of the brain. Consequently, those three references did not surface in my search. The fourth reference, authored by Drs. Rainov and Burkert, was presumably published in the German literature in 1996 after I had submitted my paper to the Journal of Neurosurgery to be considered for publication. I am sure there must be more cases that other neurosurgeons have encountered that have not been published. As rare as this type of tumor may be, the three articles referenced in my published manuscript suggest that they do indeed occur.

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Obliterated AVMs

To The Editor: I read with great interest the article by Kihlström, et al. (Kihlström L, Guo WY, Karlsson B, et al: Magnetic resonance imaging of obliterated arteriovenous malformations up to 23 years after radiosurgery. J Neurosurg 86:589–593, April, 1997). The authors reported that among 18 patients with arteriovenous malformations (AVMs) in whom postradiosurgical angiography had demonstrated complete nidus obliteration and in whom magnetic resonance (MR) imaging was performed 4 to 17 years (mean 10 years) after angiographic confirmation of nidus obliteration, they observed cyst formation in the brain adjacent to the previous AVM in five patients (28%). It is a very important point that the incidence of delayed cyst formation is not as rare as generally believed. As my colleagues and I reported elsewhere, we observed three patients who developed delayed cyst formation within the target volume after gamma knife treatment, which was demonstrated on MR imaging performed 5, 7, or 10 years postsurgery; two of the three patients were described in detail elsewhere. The incidence of this complication in our series of 14 patients was 21%. Magnetic resonance imaging was performed in our patients more than 5 years postradiosurgery.

Although the authors presented labor-intensive, long-term follow-up data obtained in their patients, two aspects of their article deserve further comment and clarification. First, the authors should clearly establish the date of the most recent follow-up MR imaging performed in their five patients that had demonstrated no cystic degeneration within the target volume. In my three patients, the cysts appeared within the cerebral parenchyma near the treated nidus, where earlier MR images had shown neither cystic degeneration nor abnormal intensity; the intervals between the MR examinations were 2, 2, and 3 years, respectively. Therefore, the cysts appeared between 3 and 5 years, 5 and 7 years, and 7 and 10 years after radiosurgical treatment, respectively. Unfortunately, Kihlström, et al., do not clearly state this information about their patients.

Second, the cysts reported by the authors were relatively small: 1 to 2 cm in diameter. I believe it is crucial to ascertain whether they are true cysts that have a potential to expand, as in our three cases in which both the appearance and the subsequent gradual enlargement of the cyst...