Neurosurgical forum

Letters to the editor

Metastases from Nonfunctioning Pituitary Carcinomas

TO THE EDITOR: Drs. Ragel and Couldwell present an interesting and comprehensive review of pituitary carcinoma (Ragel BT, Couldwell WT: Pituitary carcinoma: a review of the literature. *Neurosurg Focus* 16(4):E7, 2004).

Pituitary carcinomas, defined as distant metastases of a pituitary neoplasm, are rare; fewer than 140 reports exist in the English literature. The initial presenting pituitary tumor is usually a secreting, invasive macroadenoma, with adrenocorticotrophic hormone (ACTH)- and prolactin (PRL)-secreting tumors being the most common. The latency period between the diagnosis of a pituitary tumor and the diagnosis of a pituitary carcinoma is 9.5 years for ACTH-producing lesions and 4.7 years for PRL-secreting tumors. Survival after documentation of metastatic disease is poor; 66% of patients die within 1 year. Treatment options include additional surgery, radiotherapy, and chemotherapy, all of which are associated with poor results. Future studies will focus on identifying those invasive pituitary tumors most likely to metastasize and treating them aggressively before they progress to pituitary carcinomas.

The authors conclude that all pituitary carcinomas display a greater tendency toward systemic than craniospinal metastasis. This is definitely the case with all functioning pituitary carcinomas, but it is not applicable to the nonfunctioning ones.¹ I wish to suggest that a literature review of all the nonfunctioning pituitary carcinomas reported so far clearly shows that they are more predisposed to craniospinal than to systemic metastasis (see Table 1).

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Reference

1. Sakamoto T, Itoh Y, Fushimi S, et al: Primary pituitary carcinoma with spinal cord metastasis—case report. *Neurol Med Chir (Tokyo)* 30:763-767, 1990

TABLE 1

Literature review of nonfunctioning pituitary carcinomas*

Authors & Year	Age (yrs), Sex	Cx	Sx	Site of Metastasis		
				IC	Spinal	EN
Graf, et al., 1962†	7, F	1 yr		+	—	+
Madonick, et al., 1963†	75, M			+	—	—
Epstein, et al., 1964†	29, M	14 yrs	2 yrs	—	+	—
Solitare, et al., 1967†	66, F	12 yrs		+	—	—
Fleischer, et al., 1972†	50, M	7 yrs		+	—	—
D'Abrera, et al., 1973†	24, F	6 yrs	1 yr	+	—	+
Ogilvy, et al., 1973†	58, M	4 yrs	6 mos	+	—	—
Ricoy, et al., 1974†	47, M	8 yrs	2 yrs	+	—	—
Sakamoto, et al., 1987‡	37, F	2 yrs	4 mos	+	+	—
Taylor, et al., 1990‡	40, M	12 yrs		+	—	—
Jamjoom, et al., 1994‡	59, M	9 yrs		+	—	+
Kuroki, et al., 1994‡	46, F	3 mos	6 mos	+	+	—
Pernicone, et al., 1997‡	58, F	3 yrs	4 yrs	—	—	+
Kumar, et al., 2000‡	38, M	14 yrs	1 yr	+	—	—

* Cx = interval between diagnosis and metastases; EN = extraneural/systemic; IC = intracranial; Sx = duration of survival after diagnosis of metastasis; + = present; — = absent.

† Reviewed in Sakamoto, et al.

‡ Reviewed in Ragel and Couldwell.

RESPONSE: We thank Dr. Sivan for his comments about our paper. In our paper we combined both functioning and nonfunctioning pituitary carcinomas. When pituitary carcinomas are considered as a whole, they show a propensity to metastasize systemically, given that 88% are functional; however, as our colleague correctly points out, nonsecreting pituitary carcinomas may tend to metastasize more specifically within the craniospinal region. We thank Dr. Sivan for making this important distinction.

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