

Pituitary metastases case series

Javanbakht et al. retrospectively studied the charts of patients with [pituitary metastases](#) who were treated at the City of Hope National Medical Center in Duarte, [California](#), from 1984 to 2018. We reviewed and analyzed tumor origin, primary pituitary clinical manifestation, duration between primary tumor diagnosis and pituitary metastases, type of treatment, and patient survival. A total of 11 patients with a mean age of 59.2 years and median survival of 50.33 months were identified. Breast cancer and lymphoma were the most common primary origins in these cases, and diabetes insipidus and panhypopituitarism were the most common primary manifestations of their metastases. We also compared our results with reports in the literature published between 1957 and 2018. A total of 289 patients with pituitary metastases have been reported in the literature. Breast cancer was the most frequent primary origin of metastases, and visual involvement was the most common primary manifestation. The posterior part of the pituitary is more susceptible than the anterior to metastases. Pituitary metastases may occur as a consequence of successful primary tumor treatment prolonging the chance of seeding. Future studies are needed to determine the molecular mechanism of metastases to the pituitary ¹⁾.

Ten patients from the Department of Neurosurgery of the [Peking Union Medical College Hospital](#) (PUMCH) from Apr. 1997 to Aug. 2014 were retrospectively analyzed.

The participants included 7 males (70%) and 3 females (30%), with an average age of 60.4 years. The most common initial clinical feature was visual disability (50%). The postoperative pathology reports indicated 1 case (10%) of metastatic large cell pulmonary carcinoma, 2 cases (20%) of metastatic small cell pulmonary carcinoma, 2 cases (20%) of clear cell renal carcinoma metastases, and 5 cases (50%) of metastases of adenocarcinomas from different areas. All the patients underwent a thorough follow-up, and the average survival time was 144 days.

Pituitary metastases is a rare disease. Its diagnosis depends on the clinical manifestations and radiological results. The primary therapeutic method is surgery and subsequent radiotherapy and chemotherapy; however, the prognosis of this disease is very poor ²⁾.

Between 1995 and 2010, 201 patients were treated. The diagnosis of PM was histologically verified in 69 patients (34.3%). In the other 132 patients (65.7%), the PM was diagnosed by their physicians based on neuroimaging findings and clinical courses. The most frequent primary tumor was lung (36.8%), followed by breast (22.9%) and kidney (7.0%) cancer. The average interval between diagnosis of primary cancer and detection of PM was 2.8 ± 3.9 (SD) years. Major symptoms at diagnosis were visual disturbance in 30.3%, diabetes insipidus in 27.4%, fatigue in 25.4%, headache in 20.4%, and double vision in 17.4%. Major neuroimaging features were mass lesion in the pituitary stalk (63.3%), constriction of tumor at the diaphragmatic hiatus (44.7%), hypothalamic mass lesion (17.4%), and hyperintensity in the optic tract (11.4%). Surgical treatment was performed in 26.9% of patients, and 74.6% had radiation therapy; 80.0% of patients who underwent radiotherapy had stereotactic radiotherapy. The median survival time was 12.9 months in total. Contributing factors for good prognosis calculated by Cox proportional hazard analysis were younger age, late metastases to the pituitary gland, smaller PM size, and radiation therapy. The Kaplan-Meier survival was significantly better in patients with breast cancer and renal cell cancer than in those with lung cancer.

At the time of this writing, approximately 60% (120/201) of PMs had been treated by stereotactic radiation therapy in Japan. The median survival time was much longer than that reported in past series. To confirm the changes in clinical features and medical practice, a prospective and population-based survey is mandatory ³⁾

The cases of 36 patients with symptomatic pituitary metastases were reviewed. The most common primary cancers were breast (33%) and lung (36%). The presenting symptoms included diabetes insipidus, anterior pituitary insufficiency, and retroorbital pain. The overall median length of patient survival following diagnosis of pituitary metastases was 180 days. In 20 patients (56%), symptoms stemming from pituitary metastases were the first manifestation of illness. Local control of tumor was associated with significant improvement in survival times ($p < 0.05$) and amelioration of disabling symptoms including painful ophthalmoplegia and visual field deficits.

Aggressive treatment including both surgical decompression and radiation therapy improves the quality of life in patients suffering from symptomatic pituitary metastases ⁴⁾.

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