

Pineal Tumor Precipitating Parkinson's Presentation: Case Report



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Case Report

Objective: Can Parkinsonian features be due to a pineal tumor presenting in an adult?

Background

The clinical presentation of pineal tumors is typically associated with the size and location of the lesion. Identification following puberty is more common, but small lesions may be asymptomatic and escape detection during the lifetime of the individual. Lesions greater than 1 cm in size, although rare, are typically associated with headaches, symptoms of increased intracranial pressure, gaze irregularities, motor weakness or sensory change. Parkinsonian symptoms of tremor, rigidity and/or bradykinesia have rarely been reported in patients with pineal tumors presenting in the second through fourth decades. The early presentation of Parkinsonism raises the suspicion of an atypical etiology and leads to a more comprehensive workup. In contrast, the traditional presentation of Parkinson's disease, with the identical triad of symptoms (tremor, rigidity, and/or bradykinesia), is more commonly associated with a presentation later in life, and therefore, individuals are not routinely suspected of having or frequently evaluated for other etiologies.

Case Presentation

A 59-year-old right-handed woman initially presented with a gradual onset of right-handed tremor at rest, which progressed with bradykinesia, poor balance, and festinating gait, in December 1980. This was associated with double vision on lateral gaze. CT of the head revealed a 2cm mass in the region of the pineal gland region of the posterior fossa, and hydrocephalus affecting the lateral ventricles. Since she had a prior history of pulmonary

tuberculosis in 1943, with a recurrence in the left hip in 1960, and the possibility of another recurrence of a tuberculoma was considered. Neither excision, nor biopsy of this lesion was surgically feasible at that time, and she received a right ventriculoperitoneal shunt. Residual double vision was addressed with prism glasses. She became and remained asymptomatic over the next 18 years, until the lesion further expanded, leading to death. Brain autopsy revealed a pineal gland neoplasm of intermediate differentiation (mixed pineocytoma/pineoblastoma) which infiltrated the midbrain down to the lateral third of the left substantia nigra and pontine tegmentum.

Conclusion

Although a common neurodegenerative diagnosis in older people, not all Parkinsonism is due to the same etiology. In this case, rapid reversal of symptoms occurred following early identification of the mass lesion, and treatment of associated hydrocephalus. It is believed that the initial pineocytoma was slow growing and transformed over time, causing death at age 77 [1-3].

References

1. Marcol W, Mander M, Lewin-Kowalik J, et al. (2013) Pineal Parenchymal Tumors: Diagnostics and Prognosis. In: MA Hayat, (Ed.), Tumors of the Central Nervous System, Pineal, Pituitary, and Spinal Tumors. Springer Dordrecht Heidelberg New York London 10: 39-45.
2. Lombardi G, Poliani PL, Manara R, Moncef B, Giuseppe M, et al. (2022) Diagnosis and Treatment of Pineal Region Tumors in Adults: A EURACAN Overview. *Cancers* (Basel) 14(15): 3646.
3. De Tribolet N (2009) Management of Pineal Region Tumors. In: Sindou M (Ed) Practical Handbook of Neurosurgery. Springer, Vienna pp. 787-800.



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