Hypothalamic Injury Following Surgery for Craniopharyngioma Causing Immediate Postoperative Death

Pooja Bhandari, Sagar Nagpal, Ashwaghosha Parthasarathi, Mohammed M. Ahmed, Mayank Jeswani

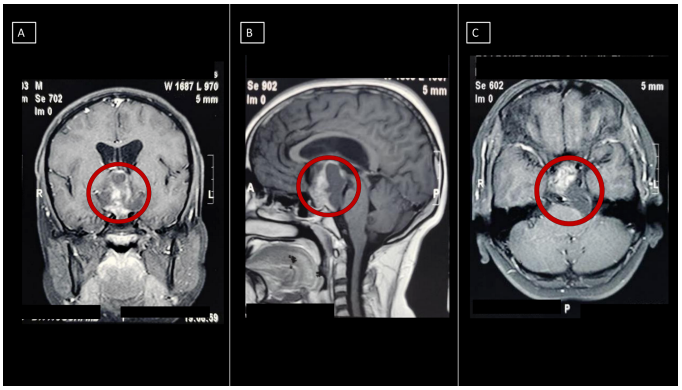
Abstract

Craniopharyngiomas are rare, benign sellar/parasellar tumors derived from embryonic tissue . Even though these tumors are slow-growing and benign, they cause complications as a result of the mass effect on the neighboring structures. This results in the patient presenting with symptoms, such as headaches, bitemporal hemianopia, and hypopituitarism.

Radical excision of craniopharyngiomas usually leads to injury to the hypothalamus. However, complications arising from autonomic dysfunction, which was seen in our case, are uncommon and do not respond well to treatment.

While autonomic disturbances resulting from a hypothalamic injury are uncommon complications following surgery for craniopharyngioma, they can lead to postoperative death. Herein, we discuss the case of a multicompartmental craniopharyngioma in a 13-year-old child who died due to unexpected hypothalamic injury, resulting in rapid deterioration in the hemodynamic and neurological status of the patient.

In our case, the tumor was noted to be multi-compartmental and was adherent to multiple nuclei of the hypothalamus. The use of Gross Total Resection in such circumstances led to damage of various nuclei of the hypothalamus, resulting in deterioration in the patient's health and, finally, led to his demise. We conclude that, in cases such as ours, the idea of SR followed by RT may prove to be a better approach despite having a higher recurrence rate because the life-threatening extreme damage to the hypothalamic nuclei can be avoided.



Recent Publications

1. Karavitaki N, Cudlip S, Adams CB, Wass JA: Craniopharyngiomas. Endocr Rev. 2006, 27:371-97. 10.1210/er.2006-0002
2. Weiner HL, Wisoff JH, Rosenberg ME, et al.: Craniopharyngiomas: a clinicopathological analysis of factors predictive of recurrence and functional outcome. Neurosurgery. 1994, 35:1001-10. 10.1227/00006123-199412000-00001
3. Hofmann BM, Höllig A, Strauss C, Buslei R, Buchfelder M, Fahlbusch R: Results after treatment of craniopharyngiomas: further experiences with 73 patients since 1997. J Neurosurg. 2012, 116:373-84. 10.3171/2011.6.JNS081451
4. Morisako H, Goto T, Goto H, Bohoun CA, Tamrakar S, Ohata K: Aggressive surgery based on an anatomical subclassification of craniopharyngiomas. Neurosurg Focus. 2016, 41:E10. 10.3171/2016.9.FOCUS16211
5. Clark AJ, Cage TA, Aranda D, Parsa AT, Sun PP, Auguste KI, Gupta N: A systematic review of the results of surgery and radiotherapy on tumor control for pediatric craniopharyngioma. Childs Nerv Syst. 2013, 29:231-38. 10.1007/s00381-012-1926-



Biography

Pooja Bhandari is a Medical Professional with vast experience and is passionate about understanding varied disease patterns, she is working on a project based on neuronal image mapping for defining the starting point of treatment in patients progressing from mild cognitive impairment to Alzheimer's disease.

She has witnessed various oncological conditions and She encountered this case of Craniopharyngioma and the odd way in which this patient responded to the treatment led her to bring into the notice of the medical fraternity. She explored different treatment options which can be helpful for providing better care of such patients in future.

Email: poojab9596@gmail.com

Presenting author details

Full name: Pooja Bhandari
Contact number: +918461989409
Twitter account:
Linked In account:
Session name/ number: NeuroSurgery
Category: (Oral presentation/ Poster presentation): Poster Presentation