Craniopharyngioma radiotherapy

Intensity-modulated radiation therapy (IMRT)

IMRT is a viable treatment option for pediatric craniopharyngioma. Despite the use of IMRT, the majority of the craniopharyngioma patients experienced long-term toxicity, many of which were present prior to radiotherapy. Limitations of retrospective analyses on small patient cohort elicit the need for a prospective multi-institutional study to determine the absolute benefit of IMRT in pediatric craniopharyngioma [1)].

Proton beam therapy

Currently there is no clear evidence that proton beam therapy will improve survival or reduce morbidity for children with craniopharyngioma. However, proton therapy has the potential to reduce RT dose to the Circle of Willis, which may reduce the risk of future cerebrovascular complications. We propose that more resources should be allocated to ensuring these patients are managed by experienced multidisciplinary teams through the continuum from diagnosis to long-term follow-up [2)].

see also Phosphorus 32 for craniopharyngioma.

1)
Greenfield BJ, Okcu MF, Baxter PA, Chintagumpala M, Teh BS, Dauser RC, Su J, Desai SS, Paulino AC. Long-term disease control and toxicity outcomes following surgery and intensity modulated radiation therapy (IMRT) in pediatric craniopharyngioma. Radiother Oncol. 2014 Dec 23. pii: S0167-8140(14)00540-4. doi: 10.1016/j.radonc.2014.11.035. [Epub ahead of print] PubMed PMID: 25542650.

2)
Conroy R, Gomes L, Owen C, Buchsbaum J, Ahern V. Clinical equipoise: Protons and the child with craniopharyngioma. J Med Imaging Radiat Oncol. 2014 Dec 9. doi: 10.1111/1754-9485.12264. [Epub ahead of print] PubMed PMID: 25487038.