Cancer Control
Volume 31: 1–2

DOI: 10.1177/10732748241254702
journals.sagepub.com/home/ccx
Sage

Letter to the Editor: Local Treatment of Children Suffering From Parameningeal Rhabdomyosarcoma - A Retrospective Single-Center Study From China

Erkan Topkan, MD[1], Efsun Somay, PhD[2], Ugur Selek, MD[3], and Berrin Pehlivan, MD[4]

Keywords
parameningeal rhabdomyosarcoma, overall survival, event-free survival

Received March 31, 2024. Received revised May 09, 2024. Accepted for publication April 26, 2024.

Dear Editor,

The research undertaken by Peng et al. regarding the effects of various local treatment strategies on 17 pediatric patients with parameningeal rhabdomyosarcoma (PM-RMS) and its potential to address the question of whether secondary radical surgery (SRS) should be recommended for these patients is praiseworthy.[1] This retrospective study aimed to comparatively assess the overall survival (OS) and event-free survival (EFS) of patients who received a combination of unified systemic chemotherapy and customized local therapies, specifically radiotherapy (RT) and/or SRS. The study found that the patients who received SRS had significantly lower 3-year EFS (33.3% vs 60.6%, $P = .020$) and OS (50.0% vs 90.0%, $P = .031$) than those who did not. On the other hand, patients who received RT had significantly higher 3-year EFS (64.0% vs 0%, $P = .011$) and OS (85.6% vs 0%, $P = .001$) compared to the non-RT group. Accordingly, the authors emphasized that SRS was linked to an unfavorable prognosis and discouraged its routine adoption. Although this study contributes significantly to pediatric, radiation, and surgical oncology literature, we would like to raise two critical concerns to further the discussion and enhance our comprehension of the authors' conclusions.

First, although the addition of SRS to chemotherapy (CT) or CT plus RT appears to be substantially inferior to the combination of CT and RT regarding EFS and OS outcomes, these results should be interpreted cautiously as several factors may have impacted them. One critical factor to consider is the differences in the PM-RMS sites between patients who received SRS and those who did not.[2] Specifically, the prevalence of unfavorable infratemporal fossa PM-RMS was markedly higher in the SRS groups (50% for each group) than in the CT + RT group (18.2%).[1] In a previous study by Merks et al, it was shown that there existed a strong correlation between the tumor location and the result.[2] More precisely, the infratemporal fossa, pterygopalatine fossa, and paranasal sinus sites exhibited the worst prognosis, whereas individuals with tumors at other PM-RMS sites had more favorable outcomes. Consequently, significant imbalances between the treatment groups may have negated SRS's potential utility.

And second, response to induction chemotherapy is a key determinant of outcomes in RMS patients, which Peng and colleagues have not examined. Although the authors posit that Kobayashi and colleagues were not able to demonstrate any usefulness for SRS, given the reported findings, this assertion may be subject to scrutiny.[3] In their study, Kobayashi and

[1]Department of Radiation Oncology, Faculty of Medicine, Baskent University, Adana, Turkey
[2]Department of Oral and Maxillofacial Surgery, Faculty of Dentistry, Baskent University, Ankara, Turkey
[3]Department of Radiation Oncology, School of Medicine, Koc University, Istanbul, Turkey
[4]Department of Radiation Oncology, School of Medicine, Bahcesehir University, Istanbul, Turkey

Corresponding Author:
Efsun Somay, Department of Oral and Maxillofacial Surgery, Faculty of Dentistry, Baskent University, 82. Street No: 26 Bahcelievler, Ankara, Turkey.
Email: efsuner@gmail.com

colleagues reported a statistically insignificant but numerically higher 3-year OS rate with SRS compared to CT + RT (65% vs 57%). Moreover, in patients with good response to CT, the SRS group had a significantly better 3-year local control rate than the CT + RT group (100% vs 44%, $P = .018$). Therefore, SRS may be beneficial in select cases and prevent significant late toxicities, such as tooth loss and radiation-induced trismus, and their negative impacts on long-term quality-of-life measures.[4,5]

In conclusion, further studies in larger cohorts comprising well-balanced patients per prognostic factors are essential to determine the value of SRS in appropriately selected PM-RMSs.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Efsun Somay https://orcid.org/0000-0001-8251-6913

References

1. Peng X, Xiong X, Li Y, et al. Local treatment of children suffering from parameningeal rhabdomyosarcoma: a retrospective single-center study from China. *Cancer Control*. 2024;31:10732748241240655. doi:10.1177/10732748241240655
2. Merks JH, De Salvo GL, Bergeron C, et al. Parameningeal rhabdomyosarcoma in pediatric age: results of a pooled analysis from North American and European cooperative groups. *Ann Oncol*. 2014;25(1):231-236.
3. Kobayashi K, Matsumoto F, Kodaira M, et al. Significance of delayed primary excision in localized nonmetastatic adult head and neck rhabdomyosarcoma. *Cancer Med*. 2016;5(10):2708-2714.
4. Lautz TB, Chi YY, Li M, et al. Benefit of delayed primary excision in rhabdomyosarcoma: a report from the Children's Oncology Group. *Cancer*. 2021;127(2):275-283.
5. Chen C, Shu HK, Goldwein JW, Womer RB, Maity A. Volumetric considerations in radiotherapy for pediatric parameningeal rhabdomyosarcomas. *Int J Radiat Oncol Biol Phys*. 2003;55(5):1294-1299.