

IS RADIATION WORTH THE RISK IN DIFFUSE LARGE B-CELL LYMPHOMA OF BONE IN THE ERA OF CHOP-R

Nicholas M. Bernthal², William Mendanha¹, Scott D. Nelson², Kamalesh K. Sankhala¹, Sant P. Chawla¹

1. Sarcoma Oncology Center, Santa Monica, CA, United States. 2. UCLA, Los Angeles, CA, United States.

MSTS # 11495

Objective: Diffuse large B-cell lymphoma (DLBCL) of the bone is an aggressive disease that has been commonly treated with Cytoxan, Adriamycin, Vincristine and Prednisone (CHOP) and then with Rituxan (CHOP-R) in recent years based on CD-20 expression. DLBCL is generally localized and historically radiation was considered a necessary adjuvant to medical therapies. Recent literature has questioned the need for additional local radiation with modern CHOP-R therapy in lymphoma. We present a retrospective cohort of 25 patients with localized DLBCL to bone treated with either CHOP or CHOP-R systemically in addition to radiation and surgery locally for fracture fixation or prevention.

Question: Does radiation carry local consequences that outweigh oncologic benefit in the setting of DLBCL of bone?

Methods: Since 1993, 25 histopathologically confirmed DLBL of the bone have received treatment with either CHOP or CHOP-R followed by XRT therapy. CT, PET/CT or MRI were used in determining radiographic disease evaluation and response to therapy, and patients were followed clinically.

Results: Out of 25 patients the median age is 46 (max 68, min 17) years, with 14 males and 11 females. Patients received a median of 6 cycles of CHOP or CHOP-R with 96% (24/25) patients showing complete response. One patient demonstrated stable disease after 2 cycles of CHOP, and was later treated with R-EPOCH attaining a complete response after 4 cycles. Average overall survival is 89 months with no patient having a relapse of original DLBCL. One patient had second primary of low grade follicular lymphoma at a distant site. There was a 20% (5/25) radiation associated complication rate, consisting of radiation induced sarcoma, chronic infection at the site of radiation, osteonecrosis at the site of radiation resulting in infection and eventual amputation, one post-operative infection also resulting in amputation, and erectile dysfunction after radiation to the pelvic region.

Conclusion: In reviewing 25 patients with primary DLBCL of bone, we have found excellent oncological outcomes using CHOP or CHOP-R with radiation. However, local complications secondary to radiation were significant. Based on published data showing equivalent oncologic outcomes without the addition of radiation, the role for radiation in the treatment of localized bone DLBCL is questionable. This series brings into question the need for radiation and highlights the additional risks associated with radiation for bone lymphoma.