Acute and late skin toxicity assessment in paediatric/young adult patients with Ewing’s sarcomas treated with chemo-radiotherapy

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Purpose
To assess skin toxicity (ST) for paediatric patients/young adults with Ewing’s Sarcomas (ES) treated with chemo-radiotherapy (CRT)

Materials and methods
• 34 patients with stage I-IV ES treated between 2010 and 2017
• 11 patients received Proton Beam Therapy (PBT) and 23 conventional radiotherapy with Photons (XRT)
• Median age at diagnosis was 15.5 years (4-25)
• Median follow up was 26 months (3-80)
• All patients received chemotherapy regimens containing Doxorubicin or Actinomycin D (Figure 1)
• RT dose given in 1.8 Gy per fraction in total dose 45/ 50.4/ 54/ 59.4 Gy
• For the purpose of this study, only clinical toxicity data were recorded.
• Acute and late toxicities are recorded using RTOG scoring system (Table 1)

Results
Logistic regression is used to investigate association between acute and late ST and clinical/treatment related factors

No significant differences in acute/late ST between:
• PBT and XRT groups
• different chemotherapy regimens
• different total dose of RT

Worse late ST (p=0.02)
• In patients underwent surgery

Conclusion
Clinical assessment shows no statistically significant differences in terms of skin toxicity between PBT and XRT. Evaluation of dosimetric parameters and their association with skin toxicity is currently ongoing.


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