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Purpose or Objective

to evaluate local and distant control in a consecutive cohort of patients with extremities and body wall soft tissue sarcomas (STS) treated with preoperative radiotherapy with or without chemotherapy.

Materials and Methods

we retrospectively reviewed records of consecutive patients with STS of the extremity or trunk treated at our institution with neoadjuvant intent after induction chemotherapy with Epirubicin and ifosfamide. Patients treated between 2016 and 2017 received radiotherapy alone, subsequent patients treated between 2018 and 2020 radiotherapy and weekly Gemcitabine.

Results

overall 27 patients were evaluated (M= 59.3%, F= 40.7%), 16 (59%) treated with RT only and 11 (41%) with RT-CT. All patients completed the treatment. Nine patients (34%) received 3 cycle of induction chemotherapy. Grade 3 toxicity was recorded in 0 patients in RT only group and in 1/11 (9.0%) patient in the RT-CT group (thrombocytopenia G3). Of the 22 patients underwent to surgery, Clear resection margins were obtained in 20 (90%) cases. Five patients (19%) achieved complete pathological response. Only four (13%) patients developed wound complications. For the whole group 2 year LC and 2 year PFS were 90.9% (median not reached) and 73.4% (median 29.4 months).

Conclusion

preoperative radiotherapy with or without chemotherapy resulted well tolerated achieving high rates of clear margins resections without the increasing of wound complications and with a good rate of complete pathological response.

PO-1419 Toxicity outcomes of hypofractionated pencil beam scanning proton beam therapy for spinal Chordomas

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Purpose or Objective

To evaluate acute and late toxicities in patients of chordoma treated with hypofractionated, image guided pencil beam scanning proton beam therapy.

Materials and Methods

Consecutive patients diagnosed with spinal chordomas treated at our centre with hypofractionated pencil beam scanning proton beam therapy (part of a prospective SCCORE- Sarcoma, Chordoma, Chondrosarcoma registry) were included in this study. Among all patients, high risk CTV (CTV-HR) was treated to a dose of 70.4CGE/32fractions and intermediate risk CTV (CTV-IR) was treated to a dose of 57.6-64CGE/32fractions. Patients underwent clinical, radiological (including metabolic- DCE MRI imaging) and QOL (EORTC QOL QC-30) evaluations at baseline and 6 monthly thereafter. Acute and late toxicities were recorded at each clinical visit as per CTCAE V4.0 and LENT SOMA scales respectively. Clinical and radiological outcomes are being reported in this study.

Results

Consecutive 23 patients with a median age of 38 years (range 4-64 years) with histologically proven chordoma (20 classical chordomas, 1 chondroid chordomas and 2 de-differentiated chordomas) were analyzed. Among patients with skull base and dorsal chordomas (15 patients) all patients underwent surgery at least once, 21% underwent surgery twice, 14% underwent thrice and 7% underwent more than 3 times. Among patients with sacral chordomas (8 patients), 63% underwent surgery at least once and 50% underwent more than once. 17% patients (2 clival and 2 sacral) underwent prior radiation with photons (IMRT technique) with 13% receiving more than once. Mean volumes of CTV HR and for skull base chordomas was 32.4cc (0.83-132cc) and for sacral chordomas was 855cc (96.1-1740cc). Two patients had acute grade 3 dermatitis, 1 patient had acute grade 3 oropharyngeal mucositis and 1 patient had acute grade 3 gastrointestinal mucositis. 28.5% of patients with Clival and 50% of patients with Sacral lesions had grade 2 acute toxicities. 1 patient had late grade 3 toxicity requiring tracheostomy. None of patients had any late grade 2/3 gastrointestinal or genitourinary toxicities. With a median follow up of 17 months (9-23 months), 21 patients (91%) remained radiologically stable with favorable metabolic response in all the 10 patients (43%) where metabolic imaging was available. Only 1 patient had in-field radiological progression and 1 patient had distant bone metastases.

Conclusion

Moderately hypofractionated pencil beam scanning proton beam therapy is feasible in patients with spinal chordomas in the context of daily image guidance. Despite high doses, large treatment volumes and large number of patients receiving prior treatments, the acute and late toxicities were relatively low in this cohort.

PO-1420 iCARE: sarcoma patient radiotherapy experience during COVID-19

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Purpose or Objective

This qualitative study is being undertaken to evaluate the current service and experience of sarcoma radiotherapy patients at the Beatson West of Scotland Cancer Centre (BWoSCC). Undoubtedly, patients often struggle with the diagnosis of a rare cancer. To ensure we are providing patient-centred care (PCC), it is crucial to understand how patients experience their radiotherapy journey. Given the challenges posed by the

COVID-19 pandemic, it is also important to understand what impact the pandemic has on treatment experience. This prospective qualitative project aims to identify areas for future service improvement to the patient's radiotherapy journey, tailored to patient needs. It will also assess whether there is benefit in the use of a distress thermometer (DT) and a questionnaire. Outcomes may enable healthcare professionals to tailor consultations to individual patients, ensuring PCC and a holistic approach.

Materials and Methods

From March 2020 till January 2021, 17 patients participated in the project. They completed the NCCN DT, indicating an overall score as well as choosing from a list of factors contributing to this score. They also completed a survey questionnaire about the care that they receive, both at the beginning of treatment and the end. Results are analysed through SPSS. The project will be run over 8 months to enable data collection for 40 participants.

Results

Results suggest patients who undertake radiotherapy in our sample have equivalent or reduced distress scores at the end of treatment compared to the beginning. Female patients are more likely to indicate higher levels of distress than male patients. The most commonly indicated contributors towards distress were emotional. Where male respondents reported distress scores of >0, they were more likely to indicate physical contributors than mental as compared with females. The majority of patients had been made aware of support services available to them. Patients most commonly reported feeling their treatment was tailored to them and that they were made to feel at ease during mould room appointments.

Conclusion

The DT is a valuable tool in the facilitation of collaborative health care. Given gender differences in distress reporting, there may be more work required to remove barriers for male patients to share their experiences. Gender-based discrepancies in distress reporting in cancer patients are commonly reported, with females being more likely to report higher distress scores (Henrich, (1999); Bodnarchuk et al., (2014)). However, psychological adjustment is seen to be better in females with cancer (Pudrovska, 2010). This may indicate that more support is required for male patients to share their experience. BWoSCC strives to provide PCC and results provide encouraging indications that this is being converted into real patient experience. More work is required in order to uncover the underlying mediators of distress and support continuous improvement.

PO-1421 MR-guided SBRT for primary cardiac sarcomas

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Purpose or Objective

Primary cardiac tumours are an extremely rare disease and 25% of them are malignant, with sarcomas accounting for 95% of them. The primary treatment of choice is surgery but prognosis is overall poor, even when complete radical resection is achieved. Other treatment options include chemotherapy and radiotherapy, historically been performed with palliative intent, in patients who were not candidates for surgery. The introduction of hybrid MR-guided radiotherapy (MRgRT) allows better visualisation of cardiac lesions and the application of high doses per fraction even in sensitive organs such as the heart. In this multicentric study, we investigated the feasibility, toxicity and early clinical results of MRgRT in the treatment of primary cardiac sarcomas.

Materials and Methods

Patients affected by inoperable primary cardiac sarcomas and treated at two different institutions were considered for this analysis and retrospectively analyzed. All patients were treated with SBRT technique and using an online adaptive workflow with a 0.35T hybrid MR Linac system (MRIdian, ViewRay Inc., Mountain View, CA). Hybrid MR scans were used for treatment planning and cine MR (up to 8 frames/second) was used for delivery gating. Figure one reports some examples of the delivered plans.

