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Purpose or Objective: For the locally advanced prostate cancers (LAPC) dose escalated external beam Radiotherapy (dEBRT) with androgen deprivation therapy (ADT) for 2-3 years is the current standard of care. The role of radical prostatectomy (RP) for high-risk prostate cancer is still debated. Better outcomes with RP as compared to dEBRT especially <69 years of age has been reported. However there is no data available from India to compare dEBRT and RP. We did a retrospective study to compare dEBRT or RP in patients with LAPC.

Material and Methods: Medical records of 77 high risk LAPC treated between 2008-2013 were analysed. All biopsy proven adenocarcinoma of prostate with high risk category (PSA>20ng/ml or Gleason score (GS) >7 or T2c-T4) were included. Patients either underwent dEBRT with image guided RT (IGRT) (group 1) or RP (group 2) along with ADT for 2-3 years. Group 1 and 2 had 37 and 40 patients respectively. The primary end points of the study were biochemical relapse free survival (bRFS), bladder and rectal toxicity, urinary incontinence (UI) and secondary end point was cancer specific survival (CSS).

Results: Median age and median pre-treatment PSA in 2 groups were comparable (66 and 65years) and (22 and 23 ng/ml) respectively. Radiologically T3/T4 lesions were present in 65% and 68% and nodal metastasis was seen in 22% and 30% respectively. Median GS was 8 and 7. Positive surgical margins was seen in 70% in group 2. dEBRT dose was 76Gy with conventional fractionation using IGRT using fiducial marker matching . With a median follow up of 3 years, 5-year bRFS was 78% and 72%. (p=0.12) .Median bRFS was not reached in group 1 and in group 2, it was 79 months. Post treatment UI was seen in 0 and 6(15%)(p=0.03). Radiation Therapy Oncology Group (RTOG) grade III-IV bladder toxicity (hematuria and bladder neck contracture requiring incision) was seen in 2(6%) and 7(18%) respectively and rectal toxicity in 2(6%) and peroperative rectal injury occurred in 2(5%) in group 2. Five year CSS was 65% and 87% respectively (p=0.086). Median CSS was not reached in any group. Six (16%) and 7(18%) patients were lost to follow up. Distant metastasis was seen in 8(22%) and 1(3%) (p=0.14).

Conclusion: UI is the complication associated with RP. Dose escalated IGRT for LAPC is no different from RP in terms of bRFS however there was a trend towards better CSS and distant DFS. Further long term follow up is needed to assess the effect on distant disease free survival and CSS.

Electronic Poster: Clinical track: Urology-non-prostate

EP-1386
Adjuvant pelvic radiotherapy for pathological high-risk muscle-invasive bladder cancer

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Purpose or Objective: Radical cystectomy (RC) and pelvic lymph-node dissection (PLND) are standard procedures in the management of non-metastatic muscle invasive bladder cancer (MIBC). Loco-regional recurrence (LRR) is a common early event associated with a poor prognosis. The aim of this study is to evaluate adjuvant radiotherapy (RT) for pathological high-risk MIBC.

Material and Methods: We retrospectively reviewed data from patients treated by RC from 3 institutions. Inclusion criteria were MIBC, histologically proven urothelial carcinoma treated by RC and adjuvant RT. Patients with conservative surgery were excluded. LRR free-survival, overall survival (OS) and metastasis-free survival (MFS) were evaluated. Acute toxicities were recorded according to CTCAE V4.0 scale.

Results: Between January 2000 and December 2013, 57 patients with a median age of 66 years (45-84) were included. Post-operative pathological staging was pT2, pT3 and pT4 in 16%, 44%, and 39%, respectively. PLND revealed 28% of pN0, 26% of pN1 and 42% of pN2. For 2 patients, no PLND was performed. Median number of lymph-nodes retrieved was 10 (2-33). Forty-eight patients (84%) received platin-based chemotherapy, 7 in neo-adjuvant and 41 in adjuvant setting. For RT, clinical target volume 1 (CTV 1) encompasses pelvic lymph nodes for all patients. CTV 1 also included cystectomy bed for 37 patients (65%). Median dose for CTV 1 was 45 Gy (4-50). Dose complement of 16 Gy (5-22) corresponding to CTV 2 was achieved in 53 of cases, depending on pathological features. Intensity Modulated RT was performed in one third of patients. With a median follow-up of 40.4 months, LRR occurred in 8 patients (14%) that appeared concomitantly with metastasis in two-third of cases. Three-year loco-regional free survival, MFS and OS were 45% (IC 95% 0.30-0.60), 39% (IC 95%, 0.25-0.52) and 49% (IC 95%, 0.33-0.63), respectively. Acute grade≥3 toxicities were observed in 5 patients (9%). One patient died with intestinal fistula in septic context. No survival or toxicity predictive factor was identified.

Conclusion: Adjuvant radiotherapy for pathological high-risk MIBC is safe and may have oncological benefits. Thus, new prospective trials evaluating this approach with modern RT techniques should be undertaken.

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Outcomes after recurrent bladder cancer and (chemo)radiotherapy post TUR-B vs cystectomy

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Purpose or Objective: To analyze patients treated for recurrent urothelial cancer with radiation therapy with or without concomitant chemotherapy after surgical intervention that was treated from 2000 to 2012 at our centre.

Material and Methods: Our inclusion strategy was to first identify patients treated for the relevant ICD-10 codes. A number of 270 patients matched the ICD-10 criteria (see CONSORT diagram). In a second step, patients that were treated at other sites than the pelvis, treated for distant metastasis, patients suffering from renal cell cancer and cancer of the renal pelvis were excluded. In a third step patients treated with radiation doses that are typical for palliation (<45Gy) were excluded from the analysis. After this, a number of 57 patients remained at the database for further analyses. All patients were treated for recurrent urothelial cancer of the bladder, of the ureter or of the urethra. All patients were treated using 3D conformal radiation therapy. Mean prescribed dose was 54.22Gy (range 45-72Gy). Mean time from first diagnosis to radio(chemo)therapy was 22.9 months (range one week to 276 months). In 24 cases (42.1 %) a concomitant chemoradiotherapy was applied.

Results: Mean survival from the beginning of radiation treatment was 39.2 months (CI 95 % 24.7 – 53.69 months; median survival 14 months CI 95% 6.8 -21.1). Tumor stage at the time of surgical intervention did not show an impact on overall survival (p=0.96). Patients were divided into three subgroups, depending on the surgical intervention prior to radiation therapy: most patients were treated by TUR(n=38) before the indication to radiation therapy was made, 13 patients had a TUR followed by cystectomy in their further history and in 6 patients early cystectomy was the first type