Material and methods: 110 patients were entered onto the study: 78 (71%) received definitive CRT with a median dose of 70 Gy to the prostate (64.8–74 Gy) and 32 (29%) received adjuvant CRT after radical prostatectomy with a median dose of 59.4 Gy (55.9–64.8 Gy). QoL, rectal toxicity, and fecal continence were assessed before CRT, during CRT at 40 Gy and 60 Gy and 8 weeks and 12 months after CRT. The following standardized questionnaires were used: the EORTC quality of life questionnaire C30, the prostate cancer module QLQ-PR25, an 8-item rectal toxicity score (RT-TOX), and the Wexner fecal continence score.
Results: Global QoL did not change significantly during CRT, 8 weeks after treatment the values were above the baseline ($p = 0.013$). The following QoL scores significantly deteriorated during therapy and then returned to the baseline after CRT: role functioning, fatigue, diarrhoea, urinary symptoms, and sexual activity. Emotional functioning improved during and after therapy and the 2- and 12-months-values were significantly above the baseline. PR-25 fecal symptoms, RT-TOX and the fecal continence score significantly increased during CRT. All three scores recovered slightly 8 weeks after CRT without reaching baseline levels and subsequently deteriorated again one year after treatment. RT-TOX and the fecal continence score correlated inversely with global quality of life 12 months after CRT ($\rho = -0.48$ and $\rho = -0.31$, respectively, $p<0.001$). Neither neoadjuvant hormonal therapy nor treatment indication (definitive vs. adjuvant CRT) was associated with RT-TOX, fecal continence or global quality of life.
Conclusions: A decrease in quality of life parameters during CRT is mostly transient and affects only a limited number of QoL domains. Especially global quality of life does not deteriorate during or after treatment. The PR-25 fecal symptom score, the rectal toxicity score and the fecal continence score display a similar time course: following a slight improvement 8 weeks after treatment the scores deteriorate again 12 months after CRT probably reflecting the onset of chronic toxicity. Impaired fecal continence, although mostly mild, must be regarded as an acute as well as a late side effect of CRT.

814 POSTER

Impact of percent positive biopsies on biochemical outcome in prostate cancer patients treated with external beam radiotherapy with or without androgen deprivation

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Background: The primary objective of this study is to identify the prognostic factors for biochemical outcome in patients with prostatic adenocarcinoma treated with external beam radiotherapy (EBRT) with or without androgen deprivation (AD) and to investigate the impact of positive biopsy core percentage in different risk groups.
Material and methods: Between 1998 and 2003, 333 patients diagnosed with prostate cancer were treated with definitive EBRT in the Radiation Oncology Departments of Metropolitan Hospital and Marmara University. Median age was 71 years (range 44–85); 74% had clinically localized (T1–2), 26% had locally advanced (T3) disease. Gleason scores were below 7 in 48%, 7 in 39%, and over 7 in 13%. Pretreatment PSA levels were below 10 ng/ml in 50%, between 11–20 ng/ml in 25%, and over 20 ng/ml in 25%. Perineural invasion (PNI) was present in 31%. Distribution of patients due to risk factors according to D'Amico was as low risk in 21%, intermediate risk in 34%, and high risk in 45%. Of the patients 18% were treated with a 4 field conventional technique, whereas 82% were treated with 4–6 conformally shaped fields. Median prostate dose defined to the periphery was 72 Gy (range 59.4–76 Gy). Androgen deprivation was given to 78% of the patients. Percentage of positive biopsy cores was calculated as number of positive cores in biopsy materials divided by total core numbers. Biopsies from seminal vesicles and nodules were excluded. The median number of cores was 8 (range 6–26). Percentage of positive cores were <33% in 34% of patients, between 33%-67% in 39%, and ⩾67% in 27%. Patients were evaluated every 3–6 months after the completion of radiotherapy. Median number of post-RT PSA counts per patient was 8 (range 3–32). Biochemical failure was defined using the ASTRO consensus definition. Potential risk factors like Gleason score, T stage, initial PSA level, PNI, time on AD, radiation dose, percent of positive biopsies and risk groups were evaluated.
Results: After a median follow-up of 35 months (range 12–91 months), the 5-year biochemical control (BC), prostate cancer-specific survival, and overall survival rates were 83%, 98%, and 88%, respectively. The 5-year BC according to risk groups were 85% for low risk, 88% for intermediate risk, and 79% for high risk patients. For the entire cohort high GS ($p = 0.0042$), high risk group ($p = 0.0281$) and higher percent positive core biopsies ($p = 0.0342$) were significant predictors of reduced biochemical control. In the intermediate risk group BC was 90% vs 74% in the patients with <67% positive cores and >67% positive cores, respectively ($p = 0.036$). On multivariate analysis the only independent predictor for PSA failure was percent positive biopsies.
Conclusions: This trial demonstrated especially in the intermediate risk group that high percent positive biopsies could be an early indicator of biochemical relapse. Those patients may be evaluated as having high risk disease.

815 POSTER

Androgen deprivation for cytoreduction prior to interstitial brachytherapy for early-stage prostate cancer is associated with an increased risk of urinary morbidity

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Background: We previously demonstrated that biculatumide monotherapy (BT) has similar cytoreductive efficacy when compared with luteinizing hormone-releasing hormone analogue monotherapy (LHRHa). Here we assess the impact of androgen deprivation (AD) given for prostate volume reduction prior to brachytherapy on acute and chronic urinary morbidity following implant.
Materials and methods: Between May 1998 and January 2004, 81 patients received AD for the sole purpose of cytoreduction prior to interstitial brachytherapy. 56 patients received a median 3 months of LHRHa (leuprolide 7.5 mg per month or goserelin 3.6 mg per month) and 25 patients received a median 3 months of BT (bicalutamide 50 mg per day). Prostate volume was measured prior to initiating hormonal therapy and then intraoperatively by a single ultrasonographer (CK). Events recorded were:
1. The incidence of urinary retention requiring prolonged catheterization (greater than 1 week)
2. The need for surgical intervention to relieve urinary obstruction
3. The occurrence of long-term incontinence (>6 months) following surgical intervention.

Outcomes were compared to those for a control group of 81 patients who were matched 1:1 based on similar prostate volume (within 1 cc) at the time of implant, but who had not received AD. Median follow-up for all patients was 41 months (range 11–66 months).
Results: Median percent reduction in prostate volume after AD was 30%. There were no statistical differences in urinary morbidity between patients receiving LHRHa and BT. Prolonged catheterization was required significantly more often for patients receiving AD when compared to volume-matched controls (27% vs. 9%, $p = 0.02$). Surgical intervention was required significantly more often for patients receiving AD when compared to volume-matched controls (9% vs. 4%, $p = 0.03$). Long-term incontinence occurred in 3 (4%) out of the 7 patients that had received AD and subsequently required surgical intervention. Long-term incontinence occurred in 1 (1%) out of the 3 patients that had not received AD and subsequently required surgical treatment.

	AD	No. AD	*P*
Median Volume at Implant (cc)	34.0	34.1	0.99
Prolonged Catheterization	27%	9%	0.02
Surgical Intervention	9%	4%	0.03
Urinary Incontinence	4%	1%	0.03

Conclusions: The use of AD for cytoreduction was associated with a significantly increased incidence of prolonged catheterization, need for surgical intervention, and occurrence of long-term incontinence when compared with patients implanted at similar volumes who did not receive AD. This suggests that patients who achieve smaller prostate volumes through the use of AD maintain an increased risk for urinary complications and should be counseled accordingly prior to implant.

816 POSTER

Tolerance of elderly patients (⩾75years) to prostate external beam radiotherapy or brachytherapy

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Purpose: To investigate if patients ⩾75yr are at higher risk of developing toxicity from prostate external beam radiotherapy (EBRT) or brachytherapy