Results. Median age of all patients was 70 years (range 56–78). Morbidities affecting refractory bleeding included smoking (10), diabetes (22), cardiovascular disease (15), anticoagulant therapy (9) and gastrointestinal disease (11). The median lowest haemoglobin level was 9.6 gr/dl. Median time between completion of radiotherapy and first session of APC was 13 months (range 4–41). Ninety-four therapeutic sessions were performed (median 3 sessions). Median time follow-up was 14.5 months (range 2–61). Complete response with resolved rectal bleeding was achieved in 23 patients (77%), partial response in 5 (16%) and no control in 2 (6%). None of 30 patients required transfusion following therapy. APC was well tolerated excluding 1 case that developed a rectal ulceration.
Conclusions. APC is a safe and effective alternative in the management of persistent rectal bleeding radiation-induced proctitis.

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Late rectal toxicity in prostate cancer. Does the calculation algorithm matter?

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Introduction. Late rectal toxicity in patients treated of prostate cancer with three-dimensional conformal radiotherapy (3D-CRT) is related to the volume of rectum irradiated. The recommendations of the international consensus (QUANTEC) to limit rectal toxicity to V50 < 50% and V70 < 20%. The values may vary according to calculation algorithm. Algorithm used in our center is the Pencil-Beam Convolution (PBC), while the algorithm Acuros (AC) has been recently implemented.
Objective. To compare the dosimetric parameters with the PBC and AC algorithms for patients with rectal toxicity grade 2/3 as measured according to the CTCv3 criteria in prostate cancer patients treated by 3D-CRT to determine the impact of the algorithm in toxicity.
Method. Between 06/2006 and 06/2008, 257 prostate cancer patients were treated with 3D-CRT. Doses for prostate and seminal vesicles (PTV1) was 50 Gy and 76 Gy for prostate (PTV11). Rectal doses were limited to: V50 < 50% and V70 < 20%. A total of 12 (4.7%) patients had rectal toxicity >2 was measured according to CTVv3 requiring hyperbaric oxygen treatment. Dose distributions were calculated by the PBC and AC algorithm. In order to compare both algorithms, the same planification volumes were used. Mean prostate and rectal dose, V50 and V70 to the rectum and maximum–minimum range PTV95% of the dose were analyzed.
Results. Mean dose for PTV1 plus PTV11 by PBC was 74.58 ± 1.44 Gy within 2 Gy range, while with AC was 73.58 ± 1.3 Gy, range of 4 Gy. The 95% isodose 74 Gy of PTV1 coincided with both algorithms. The V50 and V70 was 62% and 32% with PBC and 58% and 30% for AC. The statistical comparisons were not significant.
Conclusions. PBC and AC algorithms calculate similarly rectal doses of patients treated for prostate cancer with 3D-CRT. We have not observed any significant change in the parameters studied.

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Long term tolerance of hypofractionated radiotherapy for prostate cancer

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Introduction. Considering that the a/b ratio for prostate tumors is low, we could yield a clinical benefit by increasing the dose per fraction, since tumor cells show greater sensitivity to fractionation than adjacent organs at risk.
Purpose. Assessment of long-term tolerance in patients treated with hypofractionated radiotherapy in our Center. Assessment of PSA levels in the first and second years.
Method and material. Between January 2010 and May 2012, 59 men were treated at the Department of Radiation Oncology of the Hospital Complex of Jaén, with ages comprised between 46 and 77 years old (average 68 years old), KPS 90–100%. They were diagnosed with prostate Adenocarcinoma. PSA between 4 and 188 (average 14.5 ng/ml), Gleason 6 (64%), 7 (22%), 8 (8%), 9 (5%), clinical stage cT1c (64%), cT2 (17%), cT3 (19%). 76% of concomitant treatments with androgen deprivation.
Results. The administered dose was from 69.9 to 75.9 Gy (average 74.3 Gy), in a fractionation of 2.3 Gy per day, five days a week, with 7 fields (97%), 3D conformal radiotherapy and 18 MV photons. The tolerance after monitoring for a minimum of 6 months (7–36 months, average 15 months) was excellent, showing gastrointestinal toxicity: G0 in 88%, G1 in 7% and G2 in 5%. In a genitourinary level it was G0 in 90%, G1 in 10%. PSA was determined one year after completed in 51 patients. 2 patients developed distant disease. 11 patients without androgen blockade maintained PSA average of 1.31 ng/ml. 38 patients with androgen blockade had PSA average of 0.25 ng/ml. PSA was monitored in 9 patients after 2 years. 2 of them without androgen blockade with a PSA average of 1.17 ng/ml. The other 7 with androgen blockade and PSA average of 0.07 ng/ml.
Conclusions. The hypofractionated treatment shows an excellent medium-term tolerance. Greater monitoring is needed to determine the long-term effects and ensure its effectiveness in locoregional control.

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