

Methods. From 1999 to 2010, 102 patients were implanted with rigid needles for HDR-BT, 54T1, 33T2 and 15T4. Twenty-one patients underwent surgery plus BT for close/positive margin, 78 exclusive BT, and 3 external radiation therapy (ERT) plus BT boost. Nine fractions of 5 Gy were given in five days in 67%, nine fractions of 4.5 Gy in 10% and other schemas in the rest, prescribed to a 90% isodose. Five cases presented cervical nodes, and 3 were detected in the elective dissection (8 cases N+). Elective neck treatment was performed in 23 cases, 8 with neck dissection, 4 with sentinel node, and 11 with ERT.

Results. Median follow-up was 45 months (2–143). There were five local failures and 10 nodal failures. The 5 and 10-year actuarial local control was 94.6%, nodal regional control 88.6%, disease-free-survival 84.6% and cause-specific survival 93.2%. In the univariate analysis T4 tumors had higher risk of local failure and T2 of regional relapse. All T1 tumors were controlled and two T2 were salvaged with surgery. T4 had lower risk of nodal failure than T2 cases because 66% received an elective neck treatment, vs 22.6%. In the multivariate analysis, skin involvement was the only significant factor for tumor progression.

Conclusions. HDR-BT yields excellent local control rates. Skin involvement increases risk of local and cervical recurrence. Elective neck treatment should be done in T2-4 tumors or with skin or commissure involvement. Cervical surgery or sentinel node technique should be the first election, and HDR-BT can be a good alternative to surgery for treating the local tumor with very good cosmetic and functional outcome.

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Permanent 125-Iodine implant for patients with intermediate risk prostate cancer

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Purpose. Low dose rate (LDR) prostate brachytherapy is an accepted, effective and safe therapy for localized prostate cancer in selected patients at intermediate risk. We analyzed oncologic outcome, side-effects and complications after I-125 brachytherapy based on 13 years of experience.

Methods and materials. Between March 2000 and December 2006, 219 consecutive patients were treated with clinically localized prostate cancer. No patients received external beam radiation. All patients underwent LDR prostate brachytherapy. Biochemical failure was defined according to the “Phoenix consensus”. Patients were stratified as low, intermediate, or high risk based on D’Amico definition.

Results. The median follow up time for these 219 patients was 98 months; 9 had a clinical relapse and 32 had biochemical relapse. The 13-year actuarial biochemical control was 80% (SD ±3%). The multivariate Cox regression analyses identified, Gleason score as independent prognostic factors for biochemical failure. The actuarial biochemical control with Gleason score was 83% and 78% for patients with Gleason score of ≤6, and =7, respectively ($P=0.000$). The biochemical control was 77% and 82% (SD ±3%) for patients with PSA ≤10 and 10.1–20 respectively ($P=NS$). No patients reported incontinence after treatment. Acute urinary retention was seen in 8 (3.6%) patients. Logistic regression showed that the most significant factors which correlate with the probability of catheterisation are the pre-treatment prostate volume and hormonal therapy.

Conclusions. The excellent long-term results and low morbidity presented, as well as the many advantages of prostate brachytherapy over other treatments, demonstrate that brachytherapy is an effective treatment for clinical organ-confined prostate cancer in patients with intermediate risk tumors.

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Study of erectile function, IIEF’s test in patients treated with brachytherapy exclusive with seeds of I-125 in early prostate cancer

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Introduction. In this project we analyze the evolution of sexual function in patients treated with brachytherapy technique with radioactive sources of I-125, using the IIEF test that analyzes the sexual sphere in the aspects related to ejaculation, libido and orgasm ability.

Patients and method. It has been analyzed 256 patients affected by early prostate cancer, diagnosed between June 2002 and June 2008, mean age 64.3 years (46–79), in stage T1b 1 p., T1c 178 p., T2a 66p, and T2b 11 p. The mean PSA value was been 6.64 ng/ml (2.1–12.6). The pathological report showed an adenocarcinoma Gleason 2 in 4 p., G1 4 in 22 p., G1 5 to 41 p., G1 6 in 181 p. and G1 7 in 7 patients. It was performed a measurement of the IIEF test before implantation, 1 month, every 3 months to 2 years and every 6 months to 5 years. The mean follow-up of patients was 40 months (2–72 months).

Results. The results showed normal erectile function after 172/256 p. (67.19%), previous DE in 84/256 p. (32.81%). After treatment retain E.F. at 133/172 p. (77.3%). Transitory DE in 27%. In the aspect in relation to ejaculation the value was 3.01 (pretreatment 3.8) (Question 9). To relate with the orgasm, was a value of 2.75 pretreatment vs 3, 45 (Question 10) and with respect to libido, was a value of 5.59 vs 6.25 pretreatment (Questions 11 and 12).

Discussion. Our results show mild erectile dysfunction (ED) for 6 years, which is statistically meaningful after two years, and temporary erectile dysfunction in 27% versus 21% reported in the literature. There is a recovery of erections after the 3rd month. **Conclusions.** The technique of brachytherapy is a minimally invasive procedure with a low incidence of ED. In the virile patients it is observed a lower value in the IIEF test at 6 months. There are not any meaningful differences in the IIEF test as of the 9th month in relation to a pretreatment level. Appearances of alterations in ejaculation, orgasm and libido are infrequent, and only in the first months.

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The University of Navarre predictive model of locoregional failure after perioperative brachytherapy

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Purpose. To develop a simple clinical model predictive of locoregional failure after complete surgical resection followed by perioperative high dose rate brachytherapy (PHDRB) and external beam irradiation (EBRT).

Patient and methods. Patients ($n = 166$) enrolled in several PHDRB prospective studies conducted at the University of Navarre were analyzed. PHDRB was given to total doses of 16 Gy/4 b.i.d. or 24 Gy/6 b.i.d. treatments for negative or close/positive margins along with 45 Gy of EBRT.

Results. After a median follow-up of 7.4 years (range, 3–12+), 50 patients have failed and 116 remain controlled at last follow-up. Tumor size, with a cut-off point set at 3 cm ($p = 0.041$) and margin status (positive and <1 mm vs. negative ≥ 1 mm, $p = 0.0001$) were independent predictors of locoregional control. These two parameters were used to develop a 4-tiered, hierarchical scoring system that stratified patients into low risk (negative ≥ 1 mm margins and size ≤ 3 cm), intermediate risk (negative ≥ 1 mm margins, and size > 3 cm), high-risk (positive and <1 mm margins and size ≤ 3 cm), and very high-risk categories (positive and <1 mm margins and size > 3 cm). This classification yields 5-year locoregional control rates of 92.3%, 78.0%, 65.5%, and 48.0% for low, intermediate, high, and very high-risk categories, respectively. The predictive ability of the model is highly significant ($p = 0.0001$) with an AUC of 0.72 (0.64–0.81).

Conclusions. The risk of locoregional failure after combined surgical resection, PHDRB, and EBRT is mainly determined by the number of residual clonogens, which is inversely proportional to the status of the surgical margins and directly related to the size of the resected tumor. These two parameters generate a 4-tiered predictive model that seems to be valid for a number of different common tumors and clinical settings.

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Uveal melanoma: Survival in a series of 480 patients

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Introduction. Uveal melanoma is the primary most common intraocular malignant tumour in adults with approximately 50% survival in 10 years. The prognosis is influenced by racial and geographic characteristics and there are very few published series of southern Europe, so it is possible that survival is different in these populations.

Objectives. Study the epidemiological characteristics, and survival in series of patients with Uveal melanoma in a reference unit of intraocular tumours between 1992 and 2012, and compare the results with those previously published in other populations.

Methods. Design: Historic cohorts. Primary variables: overall and specific survival at 5 years; Secondary: Survival by prognostic factors. Data analysis: descriptive analysis of the studied variables. The studied variables will be held using Kaplan–Meier curves and multivariate analysis using the Cox proportional hazards model.

Results. From 480 patients, studied during a mean of 58.59 months, the mean age was 61.59 years (men) and 62.53 years (women). 59.7% are medium and the most common treatment is brachytherapy in 40% of them. Overall survival (OS) and specific (SS) is 81% and 87.9% respectively. Women present a higher survival (91.9%) than men (83.6%). The blue-gray irises show a SS of 75.6%, lower than darker colours. The SS for small tumours, medium and large is 97.37%, 93.7% and 64.7% respectively. The SS of patients with ciliary body invasion (58%), extraocular extension (65%), and predominantly epithelioid (43%) are significantly lower. The multivariate regression model shows worse prognosis in patients with blue eyes and large tumours.

Conclusions. The GS and SS of the patients in this study are lower than the ones previously published. The significant factors of poor prognosis are light eyes, large tumours, localized in the ciliary body, with epithelioid cell and extrascleral extension.

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