



Hypothesis / Aim of the Study

In the last decade, several tertiary referral centers have switched from the open retrograde radical prostatectomy (RP), to the robot-assisted antegrade radical prostatectomy (RARP) for the treatment of prostate cancer (PCa). In our Institution, only the antegrade approach for RP has been always performed: formerly open and currently robot-assisted. Aim of our study is to compare open antegrade radical prostatectomy (OARP) and RARP both performed with bilateral nerve sparing technique in a single tertiary referral center.

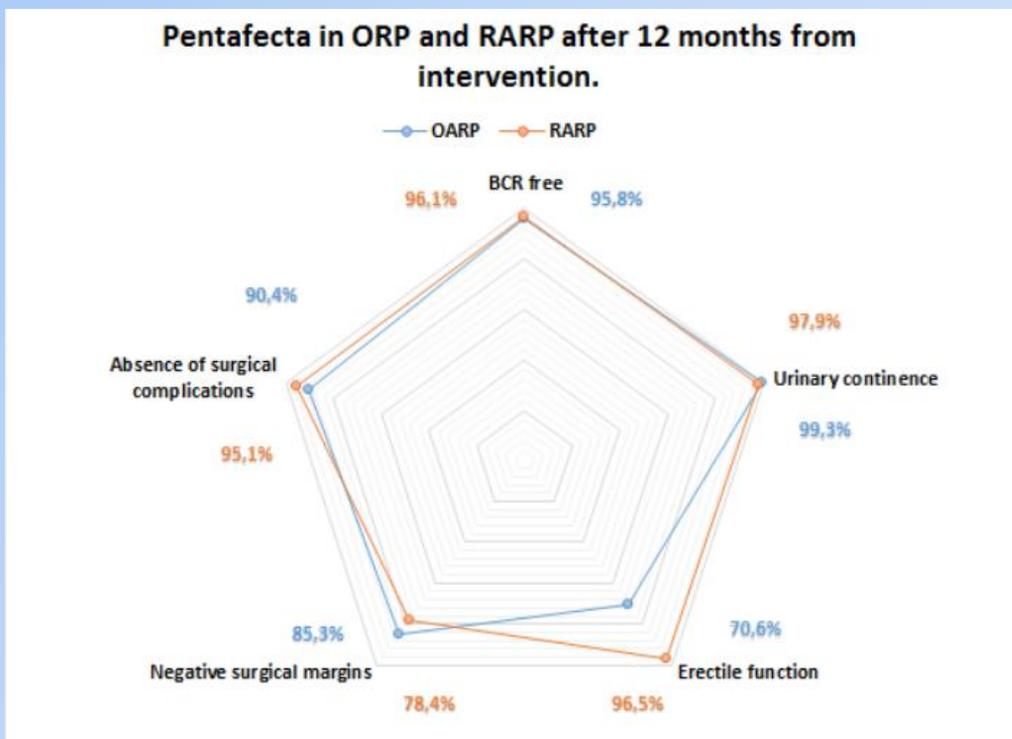
Study design, Materials and Methods

We selected 421 patients with clinically localized PCa (T1c-T2), low PSA (≤ 10 ng/ml), Gleason score $\leq 3+4$ and with a preoperative IIEF-5 score ≥ 22 , treated with RP in our Institution. Men treated with OARP (136 P.ts) and RARP (285 P.ts) were matched for age, BMI, Charlson and ASA score, preoperative PSA, bioptical Gleason score, positive/overall biopsy cores ratio and prostate volume.

Results

Men treated with RARP reported higher median operative time (180 vs. 130 min, $p=0.01$), with lower blood loss (200 vs. 650 ml, $p<0.001$), length of stay (4 vs. 6 days, $p=0.01$), catheterization time (8 vs. 15 days, $p<0,001$) and a lower occurrence of surgical complications (4.6% vs 10.3%, $p=0.02$) as compared to those treated with OARP.

Urinary continence (≤ 1 pad per day) was achieved in in 99.3% of men treated with RARP vs. 97.9% of those treated with OARP ($p=0.307$) while erectile function (IIEF-5 ≥ 17) was recovered in 96.4% of RALP vs. 70.6% of OARP ($p<0.001$). The rates of urinary continence recovery and erectile function recovery were significant different between RARP vs. OARP during the first six months of follow up (See figure)



Interpretation of Results

Our data confirmed that RARP is a safe surgical technique, with negligible blood loss, limited length of stay and catheterization time, though burdened by a prolonged operative time. RARP allows to achieve an earlier continence recovery and an higher rate and earlier erectile function recovery compared to OARP.

Concluding Message

In this study we reported for the first time in literature a large single center experience on antegrade prostatectomy performed with open vs. robotic approach. RARP is a feasible surgical technique. RARP can be performed with better intraoperative and perioperative outcomes as compared with OARP.

Disclosures

Funding: Authors declare: no financial and personal relationships exist with other people or organizations that could inappropriately influence the work Clinical Trial: No Subjects: HUMAN Ethics not Req'd: retrospective study Helsinki: Yes Informed Consent: No