#574 Impact of the Use of MRI on the Results of Robotic Radical Prostatectomy

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Abstract

Prostate cancer has a very high prevalence, it is the most frequent neoplasia in male, and it is considered the second cause of cancer mortality in men. In recent years, the consequences of its management on the quality of life. For this reason, it is very important to investigate the factors that improve their management.Prostate cancer is one of the most frequent oncological pathologies in men in terms of incidence and prevalence, both in the world and in Spain (1). With a incidence in our country of 70 cases per 100,000 inhabitants, the average age at which It is diagnosed at 69 years of age and usually in an asymptomatic stage (2). It is the most diagnosed tumor in men in developed countries and the fifthcause of cancer death in men worldwide (3).

AIM

To determine the impact of the use of MRI on the efficacy of robotic radical prostatectomy (RRP) in the treatment of prostate cancer and the relationship with subsequent symptoms.

Methods and Materials

Prospective multicenter sample of, 1136 operated patients. Groups: GS (success: n= 982): Patients cured by RRP; GR (residual or recurrence, n= 154): no cure.

Variables: Age. Magnetic resonance performed and findings, prostatic antigen (PSA), evolution time between biopsy and PRR, positive cylinders in the biopsy, T stage, Gleason, functional results, sexual life before and after treatment, erectile dysfunction treatment, urinary incontinence.

The analysis was performed using the automatic statistical software IBM SPSS Statistics for Windows, Version 25.0.

Statistical significance was accepted for p<0.05.

Table 1. Multivariate analysis between success evolution and the studied variables

Variables	B coefficient beta	Wald Valid index	p-value: statistical significance	RR: Relative risk	95% I.C	
					Lower	Upper
Previous prostate treatment(1)	-2,390	4,429	0,035	0,092	0,011	5,986
Positive ultrasound(1)	1,397	29,318	0,0001	4,042	0,438	4,746
Ultrasound clinical stageT2c(1)	7,839	19,194	0,0001	25,602	0,033	5,398
Ultrasound clinical stageT3(1)	8,803	28,784	0,0002	66,456	0,034	9,765
PIRADS 0toless3(2)	-2,463	4,313	0,038	0,0008	0,005	1,735
Conversion to open or laparoscopic surgery(1)	2,699	7,928	0,005	14,865	0,157	2,800
Pathological Stage T2a(1)	-1,603	7,743	0,005	0,201	0,575	7,780
Pathological Stage T3a(1)	-1,391	15,686	0,0001	0,249	0,000	3,328

Table 1. Multivariate analysis between success evolution and the studied variables

Variables	B coefficient beta	Wald Valid index	p-value: statistical significance	RR: Relative risk	95% I.C	
					Lower	Upper
Positive ultrasound(1)	-1,010	8,542	0,003	0,364	0,058	1,478
Ultrasound clinical stageT2a(1)	-2,456	39,326	0,000	0,086	0,180	7,031
Ultrasound clinical stageT2c(1)	-2,386	14,059	0,000	0,092	0,003	3,098
UroMRI StageT3(1)	-1,889	8,271	0,004	0,151	0,113	1,931
PIRADS 0toless3(2)	1,822	5,709	0,017	6,185	0,245	2,050
Conversion to open or laparoscopic surgery(1)	-2,699	7,928	0,005	0,067	0,348	2,805

Results

Average age 63.37 years, without differences.

Magnetic resonance performed in 56.72%, more in group GR (98.70%).

Mean PSA 7.83, higher in GR. PIRADS <3 13.64%, more in GS (15.48%); PIRADS 3 in 5.11% without differences; PIRADS 4-5 in 28.08% without differences, GR greater absence of sexual life pre-treatment 53.26% (p=0.02) and post-treatment 79.84 (p-value=0.01).

Erectile dysfunction treatment with higher PDE5i in GS (p-value=<0.01), PIRADS lower than 3 in GS was associated with less success (Relative Risk 0.0008) and with more recurrence in GR (RR6.185). In PIRADS 3 there was a longer evolution time between biopsy and PRR. PIRADS 5 was related to more positive cylinders, more T3 in MRI, more pT2b, more Gleason (4+5), more severe post-surgical urinary incontinence, shorter time between biopsy and robotic radical prostatectomy.

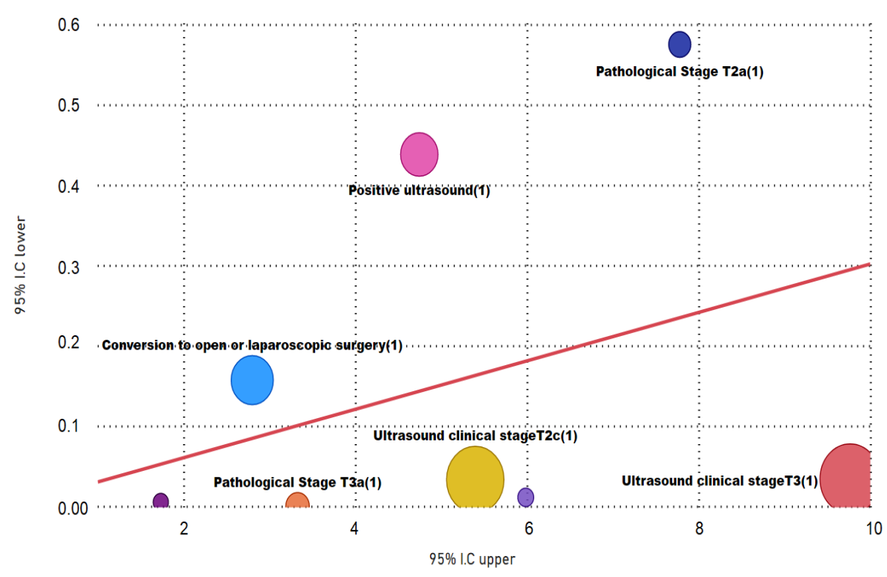

Chart 1. Logistic regression: relation between success evolution and the variables

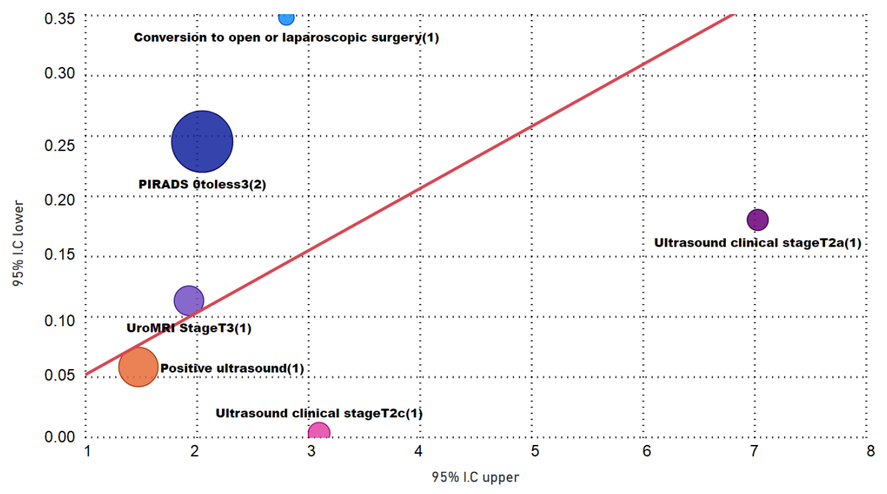

Chart 2. Logistic regression: relation between recurrence and the variables

Interpretation of results

Sexual dysfunction and urinary incontinence are frequent symptoms in prostate cancer, PIRADS characterization of nuclear magnetic resonance influences the management of prostate cancer.

Conclusions

Sexual dysfunction and urinary incontinence are frequent symptoms in prostate cancer before and after treatment with medical treatment, the PIRADS characterization of nuclear magnetic resonance influences the management of prostate cancer and helps to improve the results of the robotic radical prostatectomy. PIRADS 4 and 5 implies a shorter time between diagnostic biopsy and radical prostatectomy.

References

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