

HOW DOES THE ROBOTIC-ASSISTED RADICAL PROSTATECTOMY AFFECT NOCTURIA IN A LONG-TERM PERIOD?

Hypothesis / aims of study

Previous studies have reported that open radical prostatectomy does not improve nocturia. Robotic-assisted radical prostatectomy (RARP) is widely spread as treatment for localized prostatic cancer, characterized as minimally invasive surgery. Up to date, there are few reports about the relationship between RARP and nocturia. Moreover, there is no report about the postoperative nocturia in long-term period. We evaluated the effect of RARP on nocturia 2 years after the operation.

Study design, materials and methods

Patients undergoing RARP at our institution from October 2010 to December 2014 were enrolled in the present study. The International Prostate Symptom Score (IPSS) and nocturia were evaluated before surgery and 1, 3, 6, 9, 12, 18, and 24 months after the operation. Nocturia was defined as urination more than two times at night. The relationship between the changes of IPSS and postoperative nocturia were examined.

Results

Of the 227 patients identified for having received RARP, 120 were eligible for this study. In all of exclusion cases, we could not collect the scores of IPSS. Mean age, mean preoperative total prostate-specific antigen, and prostate volume were 65.6 years, 9.20 ng/ml, and 32.0 ml, respectively. The number of nocturia was significantly difference only 18 months after RARP between incontinence group and continence group ($p = 0.022$). Patients who had no preoperative nocturia worsened after RARP (group 1). Patients who had preoperative nocturia increased nocturnal urination in a short period and significantly decreased 6 months postoperatively (group 2). (Figure 1) Although the nerve sparing procedure was performed bilaterally in 11 cases (9.2 %) or unilaterally in 51 cases (42.5 %), there was no significant correlation between the nerve sparing and change in number of postoperative nocturia. (Figure 2) Severity of IPSS, there was no significant correlation between the preoperative IPSS score and change in number of postoperative nocturia. (Figure 3)

Interpretation of results

The present data suggest that RARP improved nocturia in cases with nocturia more than 2 times preoperatively. About nerve sparing procedure and preoperative severity of IPSS, there were no significant correlation between changes in number of postoperative nocturia.

Concluding message

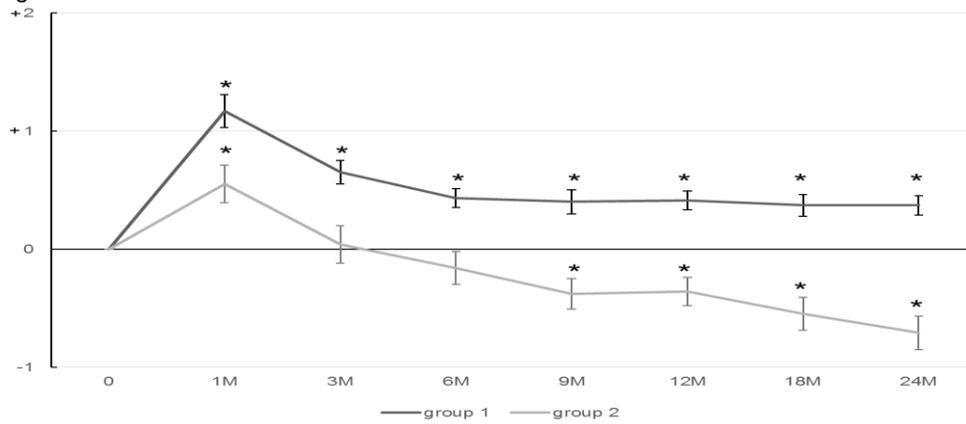
Our results suggest that RARP improved nocturia in cases with nocturia more than 2 times preoperatively. The limitation of this study is that there were few cases. A large number of patients could lead to a different result.

Table 1: Nocturia after RARP in incontinence and continence group

	incontinence	continence	p
1month	2.31 ± 0.16	2.51 ± 0.13	0.242
3month	1.87 ± 0.12	2.00 ± 0.15	0.278
6month	1.69 ± 0.10	1.76 ± 0.16	0.335
9month	1.51 ± 0.09	1.86 ± 0.20	0.170
12month	1.58 ± 0.08	1.73 ± 0.16	0.467
18month	1.42 ± 0.09	1.90 ± 0.16	0.022*
24month	1.44 ± 0.08	1.37 ± 0.21	0.551

* $P < 0.05$

Figure 1: Nocturia after RARP



P < 0.05

Figure 2: Nerve sparing and change in number of postoperative nocturia

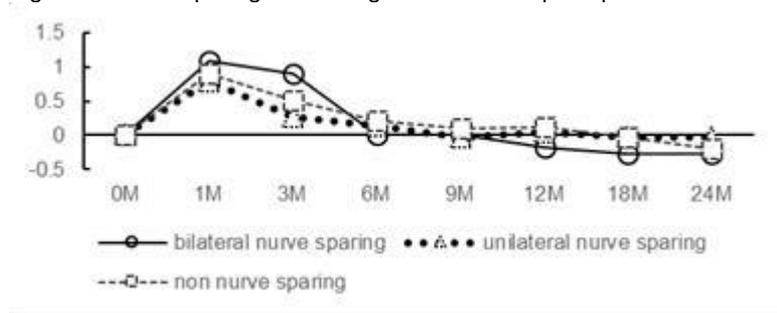
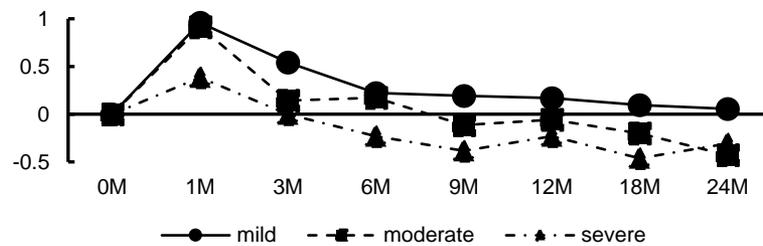


Figure 3: Preoperative severity of IPSS and change in number of postoperative nocturia



Disclosures

Funding: none **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** Tottori University ethics committee. **Helsinki:** Yes **Informed Consent:** Yes