20

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THE EFFECTS OF TYPE 5 PHOSPHODIESTERASE INHIBITORS ON THE RECOVERY OF URINARY CONTINENCE AFTER RADICAL PROSTATECTOMY

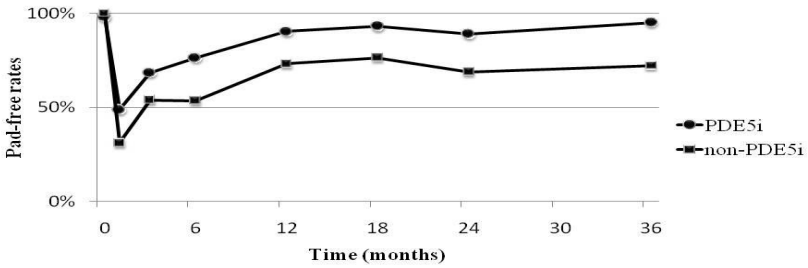
Hypothesis / aims of study
Urinary incontinence and erectile dysfunction are major complications after radical prostatectomy (RP). To promote recovery of erectile function after RP, penile rehabilitations have recently attracted attention. There have been some reports describing the efficacy of oral phosphodiesterase type-5 inhibitors (PDE5i) for penile rehabilitation in patients with postoperative erectile dysfunction. On the other hand, the efficacy of PDE5i on recovery for urinary continence after RP has not yet been well elucidated. So, we retrospectively evaluated the effects of PDE5i on the recovery of the urinary continence.

Study design, materials and methods
Between June 2003 and July 2008, a total of 269 patients with newly diagnosed localized prostate cancer (T1-3N0M0) were treated with RP in our institution. Among them, 103 patients who underwent bilateral nerve-sparing RP were recruited (average age at the time of surgery 63.2 years). A PDE5i (sildenafil, vardenafil or tadalafil) was prescribed when patients complained of erectile dysfunction and demanded pharmacotherapy, and patients were instructed to take the medicine once a week regularly. The 103 patients were then classified into two groups; a PDE5i group and a non-PDE5i group. Recovery of urinary continence was assessed and compared between groups. Urinary continence was estimated using pad-free rate obtained from the urinary function domain of the University of California Los Angeles Prostate Cancer Index (UCLA-PCI) until March 2006 and subsequently using the Extended Prostate Cancer Index Composite (EPIC) questionnaire preoperatively and at 1, 3, 6, 12, 18, 24 and 36 months after RP. Pad-free is defined as response “no pads” to item 14 of UCLA-PCI and item 5 of EPIC (how many pads per day).

Results
Of the 103 patients, 100 (97.1 %) returned the questionnaire and the collection rate was 91.5 %. Mean follow-up period was 39.4 month. Among these, 58 patients took postoperative PDE5i (PDE5i group) and 45 did not (non-PDE5i group). In the PDE5i group, median interval until start of PDE5i after RP was 91 days (range: 1–1063 days). Figure 1 shows longitudinal changes in pad-free rates of PDE5i and non-PDE5i groups, respectively. The pad-free rates initially declined to the nadir by around 1 month after RP, then, gradually improved in both PDE5i and non-PDE5i groups. However, improvement of pad-free rates was earlier and greater in the PDE5i group compared with the non-PDE5i group (95% and 72% at 36 months). Our data shows better recovery of urinary continence after RP in the PDE5i group.

Interpretation of results
PDE5is promote the recovery of urinary continence after RP.

Concluding message
Our data indicates that oral administration of PDE5i can improve pad-free rates after RP. Administration of PDE5i is recommended to improve urinary continence recovery after RP.



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What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
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Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**