

What we have been learning from Robotic Urology Surgery - Experience of 472 cases for six years at Taichung Veterans General Hospital

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Objectives: In this division, we performed 472 cases of robotic urology surgery. A single surgeon performed 394 cases, including 337 of robotic-assisted laparoscopic radical prostatectomy (RALP) and 50 cases of other surgeries. To analyze the trifecta (continence, coitus and cancer control) of 300 cases of robotic-assisted laparoscopic radical prostatectomy (RALP) divided by D'Amico risk group.

Methods: A prospective assessment of outcomes in 300 consecutive patients who underwent RALP performed by a single surgeon from Dec. 2005 to Apr. 2011. Those patients were classified by D'Amico risk: Group I, low risk: 73 cases, Group II, intermediate risk: 103 cases and Group III, high risk: 124 cases. We evaluated the perioperative complication and trifecta (continence rate, coitus and cancer control) between 3 groups.

Results: The console time and blood loss was similar among 3 groups. Post-operative stay was not significantly differences. The incidence of neurovascular bundle preserving was significantly decreased from 70%, 51% and 18% in Group I, II, and III respectively ($p < 0.001$). Perioperative complication rate was similar in 3 groups. Positive surgical margin rate was 12.5%, 35% and 50% in Group I, II and III respectively ($p < 0.001$). Continence rate at 6-month were 93%, 92% and 90% in Group I, II, and III respectively. Continence rate at 12-months were 97%, 95% and 93% in Group I, II, and III respectively. There were no statistically significant differences.

Conclusions: Prostate cancer with high risk receiving RALP is safe and feasible as intermediate and low risk. High risk group had significant low incidence of receiving neurovascular bundle preserving procedure. The continence rate was the same in these 3 groups. High risk group had significant higher incidence of positive surgical margin than low risk and intermediate risk.