



Original Article

Pathological outcomes in men with prostate cancer who are eligible for active surveillance

Shu-Chi Wang^a, Cheng-Che Chen^a, Cheng-Kuang Yang^a, Siu-Wan Hung^b, Yee-Jee Jan^c, Yen-Chuan Ou^{a,*}

^a Division of Urology, Department of Surgery, Taichung Veterans General Hospital, Taichung, Taiwan, ROC

^b Department of Radiology, Taichung Veterans General Hospital, Taichung, Taiwan, ROC

^c Department of Pathology, Taichung Veterans General Hospital, Taichung, Taiwan, ROC

Received March 25, 2017; accepted July 27, 2017

Abstract

Background: In order to prevent over treatment of prostate cancer and significant adverse effects after surgical intervention, active surveillance was suggested in low risk or very low risk patients. This study aimed to retrospectively analyze the adverse pathological results of candidates eligible for active surveillance.

Methods: A total of 904 patients underwent robot-assisted laparoscopic radical prostatectomy in this single institute, from 2005 to April 2014. One hundred and thirty-two patients were eligible for active surveillance (AS). Candidates for active surveillance were defined as low risk (T1/T2a, prostate specific antigen 10 ng/ml or less, and Gleason score 6 or less) and very low risk (T1c, prostate specific antigen density 0.15 or less, Gleason score 6 or less, 2 or fewer positive biopsy cores, 50% or less cancer involvement per core) patients. Adverse pathological results were defined as Gleason sum more than 6, and non-organ-confined disease.

Results: There were 132 patients eligible for active surveillance. One hundred and thirteen (85.6%, 113/132) patients had low risk disease and nineteen (14.4%, 19/132) patients had very low risk disease. The adverse pathological results of low risk disease were upgrading Gleason sum and non-organ-confined disease, 41.6% (47/113) and 28.3% (32/113), respectively. The adverse pathological results of very low risk disease were upgrading Gleason sum and non-organ-confined disease, 15.8% (3/19) and 15.8% (3/19), respectively.

Conclusion: We conclude that although AS may prevent over treatment and significant adverse effects after surgical intervention, stratification of patients with low risk prostate cancer is of paramount importance when choosing appropriate candidate for AS. The risk of adverse pathological results should be well informed in the pretreatment counseling.

Copyright © 2017, the Chinese Medical Association. Published by Elsevier Taiwan LLC. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Keywords: Laparoscopy; Prostate; Prostatectomy; Prostatic neoplasms; Risk

1. Introduction

Prostate cancer is a very important cancer worldwide. It is ranked the second most common cancer in men. Over the most two decades, the incidence of prostate cancer has

grown gradually upwards in Taiwan. There is a general awareness that PSA (prostate specific antigen) is a reliable biomarker, which helps early detection of prostate cancer. It helps discover early stage prostate cancer and decreases prostate cancer related deaths. Walsh et al. declared

Conflicts of interest: The authors declare that they have no conflicts of interest related to the subject matter or materials discussed in this article.

* Corresponding author. Dr. Yen-Chuan Ou, Division of Urology, Department of Surgery, Taichung Veterans General Hospital, 1650, Section 4, Taiwan Boulevard, Taichung 407, Taiwan, ROC.

E-mail address: ycou228@gmail.com (Y.-C. Ou).

<http://dx.doi.org/10.1016/j.jcma.2017.07.008>

1726-4901/Copyright © 2017, the Chinese Medical Association. Published by Elsevier Taiwan LLC. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Please cite this article in press as: Wang S-C, et al., Pathological outcomes in men with prostate cancer who are eligible for active surveillance, Journal of the Chinese Medical Association (2017), <http://dx.doi.org/10.1016/j.jcma.2017.07.008>

that radical prostatectomy is the gold standard treatment since 1980.¹

However, the trend of management has changed in recent years: from aggressively surgical intervention to the more conservative AS. Prostate cancers that received radical prostatectomy had significantly declined from 2004 to 2013, especially in the early stage of the disease.² In consideration of cancer control, active surveillance and surgery have equal outcomes in low-risk prostate cancer. Patients' quality of life has become a more important factor in choosing treatment for prostate cancer. In a three years study of low-risk prostate cancer patients, patients who choose active surveillance have a better quality of life. They have better sexual function, voiding habits, and also mental health.³ For low-risk prostate cancer, the current trend is toward active surveillance now. Surgeons can avoid over treatment for prostate cancer, significant adverse effects after operation, morbidity, and mental health decline. However, there are still some adverse results in these patients receiving active surveillance. A study from Johns Hopkins hospital showed the adverse results of upstaging and upgrading in low-risk patients are about 20%, and less than 15% in very low-risk patients.⁴ This study aimed to analyze the adverse pathological results of candidates eligible for active surveillance in Asian patients in a single institute.

2. Methods

This study was a prospective data collection and retrospective-analysis. The hospital's ethics committee approved the study protocol and all of the participants provided written informed consent.

From December 2005 to April 2014, 904 patients with prostate cancer underwent robot-assisted laparoscopic radical prostatectomy in this institute. We reviewed the pre-operative data, including digital rectal examination (DRE) finding, PSA, Gleason score, PSA density, transrectal ultrasonography biopsy results, and pathological findings. Low risk and very low risk patients, who were eligible for active surveillance, were defined by the National Comprehensive Cancer Network (NCCN) version 2.2014.⁵

There were total a total 132 patients (14.6%) eligible for active surveillance before operation. These patients were classified in to two groups, low-risk and very low-risk. The low risk group was cT1 or cT2a, PSA 10 ng/ml or less, and Gleason score 6 or less. The very low risk group was cT1c, PSA less than 10 ng/ml, PSA density 0.15 or less, Gleason score 6 or less, 2 or fewer positive biopsy cores, and 50% or less cancer involvement per core.

The final pathologic diagnosis is decided by whole mount prostate specimens. We focused on the tumor grading and tumor stage. When the tumor grading, Gleason sum, is more than 6, it is defined as an adverse pathological result. Also, if the final pathological result is not organ-confined disease, we called it an adverse pathological result. The relationship between risk groups and adverse pathological results was analyzed.

Functional outcome of continence at one year following surgery was defined as using no pad and the result was

recorded. Biochemical failure was defined as two serial PSA level >0.2 ng/ml.

3. Results

A total 132 patients eligible for active surveillance before operation were identified. These patients had chosen radical prostatectomy as the primary treatment option after providing a careful explanation of the risks and benefits of treatments. Among them, three (2.27%) were cT1a, six (4.54%) were cT1b, 81 (61.36%) were cT1c, 42 (31.81%) were cT2a, respectively. Patients were divided into two groups, low-risk patients and very low-risk patients. One hundred and thirteen patients (85.6%) were low-risk prostate cancer and nineteen patients (14.4%) were very low-risk prostate cancer. Patients' general data were compared (Table 1). There was little statistical significance in patients' age, tumor volume, mean tumor percentage and blood loss during operation. The low risk group has a lower body mass index (BMI) than the very low-risk group (23.96 kg/m² vs 24.91 kg/m², $p = 0.03$). It also has a higher PSA level and PSA density than the very low-risk group (6.71 ng/dl vs 5.73 ng/dl, $p = 0.001$; and 0.209 vs 0.114, $p < 0.0002$). The low risk group has smaller prostate volume, too (35.4 ml vs 44.89 ml, $p < 0.05$).

According to the pathology report from the whole mount prostate specimens, adverse effects were recorded (Table 2). In the low-risk group, the percentage of Gleason sum upgrading to more than 6 is 41% (47/113). Most of these patients' Gleason sum is 7 (91.48%). Additionally, there were 28.31% (32/113) of patients encountering upstaging disease, such as extra-capsular extension or seminal vesicle invasion.

Table 1
Baseline clinical characteristics of patients.

	Very-low-risk (n = 19)	Low-risk (n = 113)	<i>p</i>
Age (year)	61.78	63.03	0.559
BMI (kg/m ²)	24.91	23.96	0.03*
PSA (ng/dl)	5.13	6.71	0.001*
PSA density	0.114	0.209	0.0002*
Prostate volume (ml)	44.89	35.4	<0.05*
Tumor volume (ml)	3.15	3.57	0.755
Mean tumor percentage	6.87%	10.87%	0.128
Blood loss (ml)	147	136.96	0.232

Mann–Whitney U test.

*Statistically significant difference ($p < 0.05$).

Table 2
Final pathologic results of low-risk patients (n = 113) and very low-risk patients (n = 19).

	Low-risk group	Very low-risk group
Gleason Score ≥ 7	47/113 (41.6%)	3/19 (15.8%)
7	43	3
8	3	0
9	1	0
10	0	0
Non-organ confined	32/113 (28.31%)	3/19 (15.8%)
pT3a	29	3
pT3b	3	0

Download English Version:

<https://daneshyari.com/en/article/8758944>

Download Persian Version:

<https://daneshyari.com/article/8758944>

[Daneshyari.com](https://daneshyari.com)