Perioperative parameters and prognosis analysis of patients aged 80 years old or older treated with radical prostatectomy for prostate cancer

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Objective

To assess the perioperative outcome, continence recovery and oncologic outcome of Chinese patients aged 80 years old or older treated with radical prostatectomy for prostate cancer.

Material & Methods

We retrospectively evaluated the octogenarian patients from 2007 to 2016 who were biopsy proved prostatic carcinoma and performed laparoscopic radical prostatectomy. We collected the data of clinical variables, perioperative parameters and postoperative pathological results for octogenarian patients. After surgery we recorded and analyzed recovery of urinary continence of patients at 3 months, 6 months and 1 year after surgery. Biochemical progression was defined as postoperative PSA greater than 2ng/ml for 2 times. We evaluated the no biochemical recurrence survival rate and overall survival rate by Kaplan-Meier survival curve analysis for patients aged 80 year old or older. Mmultivariable Cox regression analyses was used for evaluating the influence factors of biochemical recurrence after laparoscopic radical prostatectomy.

Results

Table 1 Univariable and multivariable analysis of risk factors of biochemical recurrence after LRP in 80 years old or older patients

<table>
<thead>
<tr>
<th>Factors</th>
<th>Univariable (HR (95% CI))</th>
<th>P value</th>
<th>Multivariable (HR (95% CI))</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1.221 (0.856, 1.742)</td>
<td>0.271</td>
<td>1.458 (0.953, 2.230)</td>
<td>0.082</td>
</tr>
<tr>
<td>PSA ≥20ng/ml</td>
<td>3.013 (1.904, 10.644)</td>
<td>0.072</td>
<td>4.483 (1.010, 19.894)</td>
<td>0.019</td>
</tr>
<tr>
<td>Gleason score≥8</td>
<td>1.528 (0.465, 5.018)</td>
<td>0.485</td>
<td>2.501 (0.553, 11.309)</td>
<td>0.234</td>
</tr>
<tr>
<td>pT≥T3</td>
<td>3.269 (0.952, 11.228)</td>
<td>0.060</td>
<td>6.870 (1.413, 33.988)</td>
<td>0.017</td>
</tr>
<tr>
<td>Positive margin</td>
<td>4.753 (1.310, 17.236)</td>
<td>0.018</td>
<td>4.508 (1.160, 17.526)</td>
<td>0.030</td>
</tr>
</tbody>
</table>

For well selected octogenarian prostate cancer patients, laparoscopic radical prostatectomy was a feasible treatment option. Octogenarian patients who received laparoscopic radical prostatectomy showed good oncologic outcome. PSA, pT≥T3 and positive surgical margin were independent risk factors for biochemical recurrence after laparoscopic radical prostatectomy.

Conclusion

For well selected octogenarian prostate cancer patients, laparoscopic radical prostatectomy was a feasible treatment option. Octogenarian patients who received laparoscopic radical prostatectomy showed good oncologic outcome. PSA, pT≥T3 and positive surgical margin were independent risk factors for biochemical recurrence after laparoscopic radical prostatectomy.
The average operation time was 189.6 ± 69.1 min, the estimated blood volume was 169.9 ± 163.5 ml, 11 patients (21.6%) had perioperative complications.

The continence rate of octogenarian patients was 64.7%, 82.4% and 92.2% for 3 months, 6 months and 12 months after the surgery.

Overall, the median follow up was 42 months. 12 cases (23.5%) had biochemical recurrence and 4 cases (7.8%) died in follow up. There was 1 case died caused by prostate cancer progression and 3 cases for other reasons.

PSA ($P = 0.019$), $pT \geq T3 (P = 0.017)$ and positive surgical margin ($P = 0.030$) were independent risk factors for biochemical recurrence of octogenarian prostate cancer patients according to multivariable COX regression.

For well selected octogenarian prostate cancer patients, laparoscopic radical prostatectomy was a feasible treatment option.