Factors associated with current and severe physical side-effects after prostate cancer treatment: what men report

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Background:
Prostate cancer (PCa), the second most common male cancer in the developed world is increasing. Ongoing side-effects post-treatment were reported by 75% of PCa survivors in population-based research (ref below).

Aim:
To identify patient-related and disease-related characteristics that are associated with a range of current and ever experienced severe physical side-effects among prostate cancer survivors.

Methods:
Questionnaire survey to 6,937 PCa Survivors identified from 2 population based Cancer Registries on the Island of Ireland (National Cancer Registry of Ireland (RoI) and N. Ireland Cancer Registry (NI)) diagnosed 2-18 years previously. Survey included symptoms at diagnosis, primary treatments and physical side-effects - ever and current at time of questionnaire completion. Clinical staff checked eligibility of survivors for (I) aware of their PCa diagnosis, (II) well enough to complete a survey, (III) usually a resident of RoI/NI and (IV) able to understand English.

RESULTS:
3348 Men (54%) Responded

Factors associated with ‘current’ side-effects in early and late disease (%)
- ‘Current’ and ‘Ever Had’ side effects were more common in late than early disease (Fig 1a).
- Severe side effects were common with impotence highest at 40% in early patients and 53% in late PCa survivors (Fig 1b).

Factors associated with ‘current’ side-effects in early disease
- Radical Prostatectomy (RP) was associated with a higher risk of incontinence and Erectile dysfunction. Brachy therapy (BT) was associated with a lower risk of fatigue while Active Surveillance /Watchful waiting was associated with a lower risk of incontinence, sexual dysfunction, and fatigue (p<0.05).
- Multiple comorbidities at diagnosis and complications post-biopsy were associated with a higher risk of bowel problems (p<0.05).

Conclusions:
Treatment is the most important factor associated with post-treatment side-effects with radical prostatectomy associated with most side effects and most severe side effects of all treatments. After treatment, various other factors such as pre-treatment function, comorbidities and a history of biopsy complications were strongly associated with a higher risk of side-effects. These findings may be used to better inform PCa patients and physicians about the potential side-effects associated with specific treatments and which patients may be at risk of these as well as informing strategies for post-treatment follow-up and monitoring. This could ultimately lead to better informed treatment decision-making and better support after treatment.

RESULTS:

Figure 1a: ‘Current’ side-effects in early and late disease (%)

<table>
<thead>
<tr>
<th>Side Effect</th>
<th>Early (n=1700)</th>
<th>Late (n=689)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinary Incontinence</td>
<td>14.9</td>
<td>19.6</td>
</tr>
<tr>
<td>Bowel Problems</td>
<td>53</td>
<td>56.2</td>
</tr>
<tr>
<td>Impotence</td>
<td>66.7</td>
<td>66.7</td>
</tr>
<tr>
<td>Sexual Dysfunction</td>
<td>14</td>
<td>17.3</td>
</tr>
<tr>
<td>Breast Changes</td>
<td>15.1</td>
<td>15.1</td>
</tr>
<tr>
<td>Hot Flushes</td>
<td>8.8</td>
<td>8.8</td>
</tr>
<tr>
<td>Fatigue</td>
<td>30.5</td>
<td>30.5</td>
</tr>
</tbody>
</table>

Factors associated with ‘severe’ side-effects ever experienced in early disease (%)

- RP was associated with a higher risk of hot flushes and fatigue and the side-effects mentioned for ‘current’. BT was associated with a lower risk of impotence (p<0.05).

Factors associated with ‘current’ side-effects in late disease
- Complications post-biopsy were associated with a higher risk of sexual dysfunction (p<0.05).
- Comorbidities at diagnosis is associated with a higher risk of incontinence, bowel problems and fatigue (p<0.05).

Factors associated with ‘severe’ side-effects ever experienced in late disease
- Complications post-biopsy were associated with higher risk of incontinence, hot flushes and fatigue (p<0.05).
- Multiple comorbidities at diagnosis was associated with a higher risk of bowel problems and fatigue (p<0.05).

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