Heterogeneity in Responses to Cancer. Part II: Sexual Responses*

BEVERLY G.M. JOHNSTONE, Ph.D.1, MICHEL SILBERFELD, M.D.2, JUDY-ANNE CHAPMAN, Ph.D.3, CANDICE PHOENIX, M.Ed.4, JEREMY F.G.STURGEON, M.D.5, JAMES E. TILL, Ph.D.6, AND SIMON B. SUTCLIFFE, M.D.7

Heterogeneity in psychosexual responses to diseasespecific diagnosis is demonstrated for two groups of cancer patients with testis cancer and Hodgkin’s disease who are comparable in prognosis and treatment intensity. The two groups of patients and their partners are shown to differ in their ability to recover from psychiatric problems associated with the diagnosis and/or treatment of cancer.

Disease-specific sexual morbidity was examined in this study through a detailed analysis of sexual functioning for patients with testis cancer and those with Hodgkin’s disease. The two patient groups experienced similar assessments, treatment, favourable prognoses and were comparable in epidemiological characteristics (1). In Heterogeneity in Responses to Cancer: Part I, Psychiatric Symptoms (2), it was demonstrated that patients with testis cancer experience more psychiatric morbidity than patients with Hodgkin’s disease.

The sexual functioning of the patients’ partners was also examined. In Part I of this two part series, both partner groups were demonstrated to have resolved their psychiatric symptoms.

Methods

Subjects

All patients who participated in the study between 1983 and 1985 were being treated at the Princess Margaret Hospital in Toronto. Seventy patients with testicular cancer and 33 of their partners were interviewed. The feasibility of the study and the acceptability of the new Sexual Function Inventory were assessed for the first ten patients. Thirty-eight male patients with Hodgkin’s disease and 13 of their partners were assessed. Patient characteristics are described in Part I.

Study Design

Partners of patients were assessed to provide concurrent validity of patients’ perceptions of psychosexual morbidity, and to quantify the effects of the illness on those intimately affected by the patients’ disease and treatment. Sexual functioning was assessed a second time approximately three months after treatment was completed, at a time when both patient groups were informed of their chances of survival. The chances of survival were similar for patients with testis cancer and Hodgkin’s disease. (For Study Procedure, see Part I.)

Assessment Content

Sexual Functioning

A Sexual Function Form (SFF) based on that proposed by Goldberg (3) was modified to provide a comprehensive evaluation of the four phases of sexual response: desire, excitement, orgasm, and resolution. The response format was changed to a linear analogue scale. No population norms are available for comparison.

Four of ten subscales of the Derogatis Sexual Functioning Inventory (4) were also selected: Drive (D) — the frequency of intercourse, masturbation, kissing, petting, occurrence of sexual fantasies and preferred frequency of intercourse; Body Image (B1) — the satisfaction with general physical appearance and genital anatomy; Gender Role Definition (GRD) — the integration of masculine and feminine dispositions; and Affect Balance (AB) — the relative occurrence of positive and negative emotional experiences. The reliability characteristics of the Derogatis Sexual Functioning Inventory have been reported, but complete normative data are not uniformly available.

Psychiatric Morbidity

As a further indication of the patient’s response to uncontrollable adverse medical events, their attitudes towards control were assessed by the Multidimensional Health Locus of Control Scale (MHLC) (5). The Rosenberg Self-Esteem...
Reliability Assessment

Test-retest reliability of the new Sexual Function Form was adequate for both our patients with testis cancer and patients with Hodgkin's disease. Further evidence of the validity for the items of the Sexual Function Inventory was obtained by comparing the responses of patients and their respective partners for the same 24 attributes. On only one of these items did the patients and their partners significantly differ (at the 10% level). (See Table I for pre-treatment results.) The established measures of self-esteem, locus of control, body image, affect balance, drive, and gender role definition had generally very high test-retest correlations.

Results

Development and Sexual Functioning

Patients' Sexual Functioning. Developmental milestones were similar for both patient groups and did not appear to differ from the normal population. Quantitative values were obtained for 40 different areas of each person's sexual functioning. Patients and their partners assessed their own sexual lives, and partners were asked to assess the patient's status on some of the male items. This provided some corroboration of the results, since only one of the 24 partners' items indicated substantial differences from scores reported by the patients.

Pre-treatment (see Table II), patients with testis cancer and those with Hodgkin's disease had similar sexual functioning scores. Patients with testis cancer demonstrated a significant deterioration (at the five percent level in two-tailed tests) on seven of the 40 items on the Sexual Function Inventory over
the treatment period (responsiveness to partner, involvement in sexual activity, sexual foreplay, concern about erection, pain during intercourse, feelings of detachment after sexual activity, consideration of partner’s needs). For patients with Hodgkin’s disease, a significant deterioration (at the five percent level in two-tailed tests) occurred in only one of the 40 SFF items (arousal by partner).

**Self-Esteem and Locus of Control.** Self-Esteem subscale scores did not vary greatly with treatment for either of the patient groups. The Locus of Control subscale centres on three possible directions: internal, powerful others, and chance factors. Both patient groups displayed a greater than normal emphasis (p) on chance factors only (mean = 4.63 for patients with testis cancer, and 5.75 for the normal group), which remained following treatment.

**Body Image, Affect Balance, Drive, and Gender Role Definition**

The mean Body Image subscale scores for both patient groups were approximately midway between the modes for normal and dysfunctional males throughout the study. Before treatment, both patient groups had significantly lower (1%, 10% levels, respectively) scores than a normal male population on the Affect Balance subscale (mean = 1.29 for patients with testis cancer, 1.11 for patients with Hodgkin’s disease and 1.64 for the normal group; standard deviation = 4.63 for patients with testis cancer, and 5.75 for the normal group). Only the scores for patients with testis cancer remained low following treatment. Scores on the Drive subscale were similar to normal for both diseases throughout. With a mean Gender Role Definition subscale score of –6.89 patients with testis cancer were significantly different (10%) from heterosexual norms (–8.24) before treatment, and the mean score of –5.2 departed greatly from the heterosexual norm (1% level) following treatment.

**Partners**

**Sexual Functioning.** Developmental milestones were similar for both groups of partners and also resembled those of a normal population. (Details of the CAPPS interview and other partner data are available upon request.) Partners of patients with testis cancer had three significant changes on the Sexual Function Inventory after treatment (see Table III); one was an improvement (sex lasting long enough) and two deteriorations (current sex life, global change). Partners of patients with Hodgkin’s disease experienced two improvements in sexual functioning (arousal by partner and current sex life).

**Self-esteem, Locus of Control.** Partners of both patient groups had similar Self-Esteem subscale scores. Like the patients, both groups of partners experienced higher than normal scores for chance factors on the Locus of Control subscale. As with patients, treatment did not seem to affect the scores for self-esteem.

**Body Image, Affect Balance, Drive, Gender Role.** Only two results are noteworthy. Body Image subscale scores exceeded the means for dysfunctional females for both partner groups and did not change much following treatment. Drive subscale scores decreased significantly for partners of patients with testis cancer, from a mean of 15.75 to a mean of 14.61 while that for partners of patients with Hodgkin’s

---

Table III

<table>
<thead>
<tr>
<th>Variables</th>
<th>Testis Partners Pre-Treatment</th>
<th>Hodgkin’s Partners Pre-Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Mean Score (SD)</td>
</tr>
<tr>
<td>Desire</td>
<td>31</td>
<td>31.00 (26.63)</td>
</tr>
<tr>
<td>• Responsiveness to partner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excitement</td>
<td>31</td>
<td>15.26 (14.49)</td>
</tr>
<tr>
<td>• Aroused by partner</td>
<td>31</td>
<td>19.87 (22.42)</td>
</tr>
<tr>
<td>• Involvement in sexual activities</td>
<td>31</td>
<td>11.65 (17.38)</td>
</tr>
<tr>
<td>• Sexual foreplay</td>
<td>31</td>
<td>16.84 (24.12)</td>
</tr>
<tr>
<td>• Worry about erection</td>
<td>31</td>
<td>9.47 (17.67)</td>
</tr>
<tr>
<td>Resolution</td>
<td>30</td>
<td>18.58 (25.82)</td>
</tr>
<tr>
<td>• Feelings of detachment after sex</td>
<td>31</td>
<td>23.26 (21.28)</td>
</tr>
<tr>
<td>• Considerate of partner’s needs</td>
<td>31</td>
<td>40.00 (29.52)</td>
</tr>
<tr>
<td>• Sex lasting long enough</td>
<td>31</td>
<td>36.09 (32.68)</td>
</tr>
<tr>
<td>• Current sex life</td>
<td>32</td>
<td>25.58 (32.85)</td>
</tr>
</tbody>
</table>

*Only those attributes with a significant value for partners are presented

†From two-tailed matched t-tests on pre-treatment and post-treatment data
disease, 16.62, remained similar throughout the pre- and post-treatment period.

Discussion

A difference in gender role definition was the only distinction in sexual functioning. This weak evidence of an abnormality among patients with testis cancer became more pronounced after treatment leading to a marked difference from the heterosexual norm. This is the only difference found that may be consistent with an earlier report of a prior impairment of sexual development in these patients. (6) The etiological implications of this finding, if any, remain obscure.

Sexual functioning deteriorated markedly in seven areas for the patients with testis cancer, whereas patients with Hodgkin's disease worsened in only one, and improved in all others. Such a difference is clinically significant irrespective of the length of follow-up. It points to a need for further psychological evaluation at the end of treatment for patients with testis cancer and the development of an intervention strategy. (8,9) Why do patients with testis cancer deteriorate further instead of improving? Prior differences in psychosexual development have been explored as a possible etiology. The location of the tumour at the genital site may reflect more than a social symbolic "value" to the patient especially with the likelihood of infertility. Other etiologies for the findings of this study should be sought and explored.

Partners of patients with testis cancer showed some further deterioration in sexual functioning, whereas the partners of patients with Hodgkin's disease worsened overall. Illness clearly affects not only the patients, but those close to them as well. Those with a strong attachment to patients often mirror the distress of their loved ones. How many partnerships survive the illness to continue as fulfilling relationships? The lack of resolution of sexual dysfunction in the partnerships of patients with testis cancer may be a sign impending separation. Alternatively, the healing period for these couples may just be longer. Again, the indications are there for selecting the partnerships of patients with testis patients for intervention and further study.

Acknowledgements

The authors gratefully acknowledge the invaluable assistance of the staff of the Testis Clinic, P.M.H. (Drs J.F.G. Sturgeon, M.K. Gospodarowicz, R.E. Alison, M. Jewett, J. Herman, W.D. Rider, N.V. Hawkins) the Jennison Research Laboratory, Wellesley Hospital (Director, Dr. M. Jewett), the Biochemistry Laboratory, Wellesley Hospital, and Dr. Antonio Ciampi for initial consultation on statistical methodology.

References


Résumé

La présente étude fait la preuve de l'hétérogénéité des réactions psychosociales lors du diagnostic précis d'une maladie chez deux groupes de malades atteints de cancer, dont le pronostic et l'intensité du traitement sont comparables : le cancer du testicule et la maladie de Hodgkins. Les deux groupes de malades, ainsi que leurs partenaires, ne montrent pas la même aptitude à surmonter la morbidité associée au diagnostic et/ou au traitement.