Occupational Therapy Intervention for Cancer Patients With Metastatic Disease

(cancer rehabilitation, occupational therapy, oncology)

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Very little information is available on the role of occupational therapy in the care of cancer patients who are being actively treated for metastatic disease. To gain information on occupational therapy assessment and treatment procedures, we reviewed the records of 54 adult inpatients who received occupational therapy services during a hospital admission. We found that assessment focused on independent living skills, sensorimotor components, and therapeutic adaptations. Treatment also focused on these areas but placed heavy emphasis on physical daily living skills, range of motion, assistive/adaptive equipment, and energy conservation. These findings indicate that occupational therapy has a unique role in the physical care of cancer patients with metastatic disease.

New treatment modalities have led to improved rates in the control and cure of cancer (1). These improvements create a new patient population that has chronic problems which result from cancer and cancer treatments; these problems deal with patient mobility, self- and home care, vocational/educational issues, emotional concerns, leisure activities, transportation, physical capacity, and nutrition (2, 3) and are similar to those problems that result from other chronic medical conditions (4).

While it is apparent that occupational therapists throughout the country participate in cancer rehabilitation programs (5) and are used as a resource for cancer patients having metastatic disease (3, 6), little information is available to illustrate the specific role of occupational therapy in metastatic cancer. Professional textbooks (7, 8) make little or no reference to oncology populations. There are some general descriptions of occupational therapy contributions to cancer care in the cancer rehabilitation literature (4, 9); however, few specific examples are available.

The majority of occupational therapy literature focuses on postsurgical and terminal care of the cancer patient. The American Occupational Therapy Association’s Division of Practice Information Packet entitled “Cancer” (available from AOTA Products, 1383 Piccard Drive, Rockville, MD 20850) emphasizes postmastectomy procedures, rehabilitation of the shoulder after radical neck dissection, and reactions to loss. The type of occupational therapy intervention following cancer surgery has been described for several types of cancer. For the patient with breast cancer, the literature focuses on shoulder exercises and the reduction of lymphedema (7), which may follow mastectomy. Prosthetic construction is discussed in relation to forequarter amputation secondary to osteogenic sarcoma of the humerus (10). For the patient with head and neck cancers, occupational therapy treatment includes information on energy conservation, work simplification, range of motion, feeding and swallowing therapy, food preparation, and adjustment to disability (11). The environmental and psychosocial problems associated with pediatric malignancies have also been addressed by occupational therapists; the primary emphasis here is on providing support and assistance for psychosocial problems (12).

Recent contributions to the literature illustrate the role of occupational therapy in hospice care.
Picard and Magno (13) state that the presence of occupational therapy improves the patient’s quality of life by giving purpose to his or her remaining days. Tigges and Sherman (14) demonstrate that occupational therapy helps the terminally ill patient who has physical and temporal limitations to actualize occupational roles in self-care and in work and play. Pizzi (15) emphasizes locus of control and occupational roles as determinants in enhancing quality of life for the terminally ill person.

Occupational therapy for patients who are being treated actively for metastatic disease has not been specifically defined. It is interesting to note that other allied health professions have delineated their role with this particular population (16, 17). The following study was undertaken to examine specific occupational therapy assessment and treatment components applicable to patients with metastatic cancer and was not intended to provide detailed information on specific therapeutic procedures. Descriptors from the Uniform Terminology for Reporting Occupational Therapy Services (18) provide a common framework throughout this paper.

Methods

A retrospective chart review was done to study occupational therapy assessment and treatment provided to a group of patients with metastatic cancer. Permission was obtained to review the patients’ medical records. These patients received occupational therapy services while they were admitted to an oncology unit at a university teaching hospital affiliated with a comprehensive cancer center. Admissions for a one-year period were reviewed and resulted in 54 records usable for the study. The patients were referred to occupational therapy by the attending oncologist; this was usually done on recommendation by a multidisciplinary cancer rehabilitation team. We reviewed all charts for information regarding patient disease, discharge disposition, cancer treatment, and occupational therapy services. We recorded the patients’ occupational therapy assessment and treatment variables according to the Uniform Terminology for Reporting Occupational Therapy Services (18). Data were tabulated to provide a description of services provided to these patients.

Results

The 54-patient sample was composed of 40 females (74%) and 14 males (26%). The age range was from 22 to 87 years, with a mean of 59.8 years. The length of hospital stay ranged from 1 to 60 days, with an average length of 18.7 days. The average occupational therapy referral was made 12 days before discharge. Breast cancer (57%) and lung cancer (19%) were the most prevalent diseases in this group (see Table 1). The majority of patients had distant metastatic disease. Most patients were receiving either chemotherapy (37%) or radiation therapy (44%). At discharge, the majority of patients (65%) returned to their own homes (see Table 2).

A number of assessment techniques were performed on this group of 54 patients. According to the Uniform Terminology for Reporting Occupational Therapy Services (18), assessment includes screening, patient-related consultation, evaluation, and reassessment. Ninety percent of the 113 assessments took the form of evaluation. As illustrated in Figure 1, most evaluation focused on independent living (e.g., grooming and hygiene, and dressing), sensorimotor components (e.g., range of motion, strength and endurance), and therapeutic adaptations (e.g., assistive/adaptive equipment). In all cases, assessment was directed to the problems stated on the referral. Informal screening was done throughout the therapy process to identify any problems in addition to those mentioned in the referral. Permission was sought from the physician when indicated to include these additional problems in the therapy program.

Treatment provided by the occupational therapist corresponded to the evaluation performed, focusing heavily on the areas of independent living, sensorimotor components, therapeutic adaptations, and also prevention (see Figure 2). For example, a tub bench (therapeutic adaptation) and instruction in joint protection/body mechanics (prevention) were provided to a woman whose breast cancer had metastasized to the pelvis; this metastasis resulted in both mobility

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>Number of Patients</th>
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<tbody>
<tr>
<td>Breast</td>
<td>31 (57%)</td>
</tr>
<tr>
<td>Lymphoma</td>
<td>2 (4%)</td>
</tr>
<tr>
<td>Lung</td>
<td>18 (19%)</td>
</tr>
<tr>
<td>Melanoma</td>
<td>3 (6%)</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Colorectal</td>
<td>2 (4%)</td>
</tr>
<tr>
<td>Other</td>
<td>5 (9%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54 (100%)</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Number of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>35 (65%)</td>
</tr>
<tr>
<td>Nursing home</td>
<td>2 (4%)</td>
</tr>
<tr>
<td>Local hospital</td>
<td>5 (9%)</td>
</tr>
<tr>
<td>Not recorded</td>
<td>3 (5%)</td>
</tr>
<tr>
<td>Died in hospital</td>
<td>9 (17%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54 (100%)</strong></td>
</tr>
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problems and the possibility of fracture. A breakdown of independent living treatments (see Figure 3) shows that physical daily living skills (e.g., grooming and hygiene, feeding/eating, dressing, functional mobility, functional communication, and object manipulation) were the most common (76%). Figure 3 shows that psychological/emotional daily living skills (e.g., self-concept/self-identity, situations coping, and community involvement) made up a smaller (16%), but significant, group of independent living treatments. Graphic analysis (see Figure 4) indicated that sensorimotor treatment was composed chiefly of activities designed to improve range of motion (55%) and increase strength and endurance (33%). The therapeutic adaptations category of independent living treatment was composed solely of providing assistive/adaptive equipment, whereas energy conservation was the most prevalent (80%) preventive treatment given to this sample.

**Discussion**

As the population of surviving cancer patients grows, occupational therapists may be called on to provide intervention directed at improving the quality of this survival and maximizing the existing function of this population. While the study described earlier is limited to a small group of patients and to interventions deemed necessary by the physician and the practicing therapist, the results may be useful in emphasizing important areas for occupational therapy practice with this patient group.

Based on survey results, we suggest that occupational therapy evaluation of the patient with metastatic cancer routinely include independent living skills, sensorimotor components, and therapeutic adaptations. Physical debilitation due to effects of disease and treatment may, in turn, influence discharge planning along with the quality of life issues. Evaluation in these areas allows treatment to focus on restoring function when possible, maximizing function within limitations of the disease, and delaying the effects of progressive disease. These are areas that to date have not been specifically addressed in the occupational therapy literature on cancer.

Occupational therapy treatment areas for this patient population could include physical daily living skills that help the patient maintain independence within the limitations imposed by the disease. The standard techniques described in professional textbooks (7, 8) are useful for both the oncology population and other chronic disease populations.

Sensorimotor treatment could focus on activities that would increase strength and endurance, and range of motion. Limitations in these areas may occur secondary to the disease process (e.g., spinal cord compression), the treatment modality (e.g., fatigue following radiation therapy), and to disuse inactivity. Techniques for addressing these limitations are available (7, 8) and can be applied with recognition of special precautions that may be indicated (e.g., the presence of bone metastasis). When patients are discharged to home, a home therapy program geared toward maintaining or increasing function is a useful component of intervention. Family members can be in-
Figure 2
Types of occupational therapy treatments performed \( (N = 88) \)

- A. Independent living
- B. Sensorimotor
- C. Therapeutic adaptations
- D. Prevention
- E. Cognitive
- F. Psychosocial

Figure 3
Types of independent living treatments performed \( (N = 38) \)

- A. Physical daily living skills
- B. Psychological/emotional daily living skills
- C. Work
- D. Play/leisure

Therapeutic adaptations should be taken into consideration at the time of discharge. Decreased endurance, mobility problems, safety considerations, and the presence of bone metastasis may be indicators for equipment such as tub benches, safety rails, wheelchairs, raised toilet seats, and commodes. This equipment can often be borrowed from local chapters of the American Cancer Society, visiting nurse organizations, or Veterans of Foreign Wars posts. Equipment can also be rented or purchased; this can be arranged by the occupational therapist.

In our survey, preventive occupational therapy treatment was chiefly composed of patient education regarding energy conservation. Fatigue is known to be a prevalent problem in cancer (2, 19). Because the etiology of fatigue is unclear and thought to be produced by the interaction of many factors (20), teaching patients to manage their fatigue may be a reasonable treatment approach. Therapists have used energy conservation and work simplification techniques with patients who have reduced energy levels that resulted from other chronic diseases, such as rheumatoid arthritis (7). The same techniques can be applied to cancer-related fatigue.

This survey resulted in a heavy emphasis on physical limitations related to cancer and little emphasis on the emotional aspects of metastatic cancer. We acknowledge that the study method and limited sample may prevent reflection of the actual range of occupational therapy assessment and treatment techniques applicable to this population. However, these results illustrate an expanded role for occupational therapy, one which is beyond that currently described in the literature. Prevalent problems related to cancer have been documented and include (but are not limited to) fatigue, self- and home care, vocational, emotional,
leisure, pain, nutrition, and mobility (2); other documented problems include psychological, general weakness, activities of daily living, pain, ambulation, housing, neurological, family support, finances, and vocational (3). The functional perspective of the occupational therapist can be easily distinguished from the framework of other professions. In a chronic disease like metastatic cancer, this perspective broadens the focus of care and is a well-defined contribution to the care plan. Evaluation and treatment related to independent living activities, sensorimotor components, therapeutic adaptations, and prevention techniques are specific areas that can effectively address many of the problems documented in metastatic cancer; these areas must be part of the comprehensive occupational therapy programs designed for this population.

Conclusion

Occupational therapists have the skills necessary to participate in the care of cancer patients being actively treated for metastatic disease. Intervention can be guided by assessment and treatment methods commonly applied by occupational therapists to other disease populations (21). According to Dietz (22, p 145), rehabilitation in cancer "allows for inclusion of patients with all categories of need: prevention, restoration, support and palliation."

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REFERENCES