Economic analysis of psychosocial group therapy in women with metastatic breast cancer

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Abstract

Purpose Metastatic breast cancer is associated with psychological distress in one-third of patients. We examined the impact of group psychosocial support on health care costs in metastatic breast cancer. Psychosocial interventions have been shown to reduce psychological distress in these patients. In other diseases, depression and anxiety have been associated with higher health care system resource utilization.

Methods Data on health care system resources utilization were collected as part of a Canadian multicenter randomized controlled trial of a supportive-expressive group support in metastatic breast cancer. Costs were obtained from one tertiary care hospital in Toronto. A cost minimization analysis was conducted since there was no survival difference; the primary endpoint of the study. Cost-effectiveness analyses were conducted for mood and pain.

Results Total health care utilization costs (including costs of the group therapy intervention) for the intervention and control groups were $31,715 and $28,189, respectively per patient. The difference in total costs between groups ($3,526) was not statistically significant (P = 0.53). The cost-effectiveness analysis for mood showed the intervention group to have an increased cost of $5,550 per patient for an effect size of 0.5 on the POMS scale. The corresponding cost for pain was $4,309. An exploratory analysis on patients who were more distressed at baseline showed a non-significant decrease in cost in favor of the intervention arm (difference of $3,911 P = 0.66).
Conclusion Psychosocial intervention, in the form of supportive-expressive group support for metastatic breast cancer, does not lower health care system resource utilization.

Keywords Cost-effectiveness · Metastatic breast cancer · Psychotherapy

Introduction

Breast cancer is the second leading cause of cancer-related death among American and Canadian women [1, 2]. Further, studies have shown that one-third of breast cancer patients experience psychological distress and that this rate may increase as the disease progresses [3, 4]. As a result, there is increasing interest in interventions aimed at reducing psychological distress. In the metastatic breast cancer population, five of the six trials conducted to evaluate group support demonstrated benefits in stress, mood, pain or depression [5–10].

The literature also suggests that psychological distress and depression may lead to increased utilization of health care resources [11–14]. Further, a high proportion of heavy health care users suffer depression, generalized anxiety disorders and panic [15, 16]. Psychosocial interventions may be seen as simply adding costs to usual care. A meta-analysis did report, however, a cost reduction of about 20% associated with psychological interventions [17]. Unfortunately, economic analyses in psychooncology are scarce, with few studies using economic or resource utilization outcomes [18–20].

In 2004, the Institute of Medicine and the National Research Council of the National Academies recommended that cost and quality of life be included as outcomes of psychosocial intervention research in routine breast cancer care [21]. We report in this paper the first economic evaluation of a psychosocial intervention in a metastatic breast cancer population.

Methods

Data

Data from the Breast Expressive-Supportive Therapy study conducted by Goodwin and collaborators [10] were used in this analysis. A full description of the methods and results can be found in previous publications [10, 22]. Briefly, this was a randomized controlled trial evaluating the effect of weekly supportive-expressive psychosocial group therapy (a standardized, professionally led, manual-based intervention) plus standard care versus standard care alone on survival (primarily) and pain, psychosocial functioning and health related quality of life (HRQOL) (secondarily) in women with metastatic breast cancer. Seven Canadian centers took part in the study with 235 women with metastatic breast cancer randomized in a 2:1 ratio (intervention:control). Research ethics board approval was obtained for the main trial and for this economic analysis. All women provided written informed consent to participate in the study.

The economic analysis was performed on a subset of patients; those from the three largest trial sites were included since these centers provided the most reliable prospective reporting of health care utilization. Reflecting the 2:1 randomization ratio, this subset includes 82 intervention and 43 control patients.

Resource utilization

Resource utilization data were collected prospectively from the time the patient was recruited (1993–1998) to the end of the study (October 2000) or time of death. Utilization data included: radiation treatment (radiation fractions and separate sessions attended), hormone treatment (type, number of days and dose), chemotherapy treatment (type, number of cycles), hospitalizations (medical or surgical, diagnosis and procedure, length of stay), ambulatory surgery (procedure), diagnostic procedures (number and type), prescription drugs (type), other supportive psychological treatments (number and type). Visits to primary care physicians and to the medical oncologist were not recorded.

When necessary, assumptions based on standard treatment protocols were made for missing data elements. Where the number of fractions of radiation treatment was missing, 5 fractions were assumed (standard for palliative treatment in Canada). Where data was missing for the number of days in hospital, the expected length of stay by Case Mix Group (CMG) as published by the Canadian Institute for Health Information for 2002/2003 was assumed.

Economic analyses

This economic evaluation is primarily a cost-minimization analysis as there was no significant difference between the intervention arm and the control arm in survival. We have also undertaken an exploratory cost-effectiveness analysis using the outcomes of mood (measured using the Profile of Mood States—POMS).