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Clinical Study

The value of palliative surgery for metastatic spinal disease: satisfaction of patients and their families

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Abstract

BACKGROUND CONTEXT: Although there have been several studies in which the surgical outcomes were evaluated by pain reduction or neurological improvement, there have been few studies focused on the quality of life (QOL) of the patients after the surgery. We considered that the most important consideration in palliative surgery was to respect the wishes of patients and their families, which are likely to be influenced by the patients' QOL for their limited life span.

PURPOSE: To evaluate the value of palliative surgery for spinal metastasis and to identify the factors predicting satisfaction of patients and their families after the surgery.

STUDY DESIGN: Questionnaire-based survey of palliative surgery for spinal metastasis.

PATIENT SAMPLE: Seventy-one consecutive patients who had undergone palliative surgery and their families.

OUTCOME MEASURES: Survival period after surgery, neurological status, ambulatory period, pain scale, and satisfaction of patients and their families.

METHODS: The QOL of the patients after surgery was evaluated by analyzing the satisfaction and related parameters of patients and their families. Questionnaires were sent to 71 consecutive patients who had undergone palliative surgery for spinal metastasis. To identify the factors predicting satisfaction of patients and their families, multivariate logistic regression analyses were performed.

RESULTS: Questionnaires were successfully delivered to 71 patients or their families. Full responses were collected from 37 patients, giving an overall response rate of 52.2%. Overall, 80% of patients were satisfied with the results of the surgical treatment. Age (below 65 years) and neurological improvement after surgery were significant predictors of patient's satisfaction. Pain reduction and the continued survival of the patient were significant predictors of family member's satisfaction.

CONCLUSIONS: These results strongly suggested that palliative surgery is a valuable treatment for metastatic spinal disease. Younger patients were more likely to want active treatment and to seek any functional improvement that contributed to an improved QOL in their limited life span. Pain control and the length of patient survival were important factors for people caring for patients.

Keywords: Spinal metastasis; Palliative surgery; Satisfaction; Quality of life

Introduction

The spinal column is the most frequent site of bone metastasis, and between 30% and 70% of patients with cancer will have evidence of spinal metastasis at autopsy [1–3]. Spinal cord compression, the most serious sequela of spinal metastasis, occurs in 20% of patients with such metastasis

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[4]. Spinal column metastasis may cause significant clinical problems, including severe pain and neurological symptoms. Treatment of metastatic disease of the spine involves a fine balance between survival, function, and overall quality of life (QOL). Radiotherapy has been traditionally considered to be the first-line treatment for spinal metastasis. In cases of radioresistant tumors with neurological compromise or mechanical instability, nonsurgical treatment has not proved effective.

Surgery has been performed on occasion for patients with metastatic spinal tumors and has been shown to be an excellent treatment for symptoms of pain and palsy. An improvement in QOL that cannot be achieved by other methods can be immediately apparent in selected patients [5]. Surgery can provide early mobilization, return of useful ambulation or urinary function, pain reduction, and improvement in QOL, as well as prolongation of life [6]. Improvements in spinal surgical techniques and implants now allow for safe and effective decompression of neural elements and provide structural stability by means of a rigid internal fixation [7,8]. The objectives of surgical management for metastatic spinal disease are usually palliative. However, the prognostic factors affecting outcomes after spinal metastasis remain unclear, and the use of surgery is still controversial [9–12].

Because metastatic disease suggests a limited life expectancy, the ability to function and the QOL become profoundly important considerations. Although there have been several studies to objectively evaluate the effects of surgery on survival and functional status, there has been little attempt to subjectively assess the outcomes. Certainly, several physical factors, such as ambulation status, pain reduction, and prolongation of life, may be important to the QOL of the patients. We considered that the most important factors affecting the QOL of the patients with a limited life span were measures of their subjective satisfaction, such as having a stable and positive outlook. Therefore, in the present study, we chose the satisfaction of patients and their families as an indicator for success of surgical intervention for metastatic spinal disease. To establish the value of this treatment, we evaluated satisfaction using a questionnaire.

EVIDENCE & METHODS

Context
Patient and family satisfaction following palliative surgery for metastatic spinal disease has been understudied. This article aims to address this issue.

Contribution
The authors found improved function and decreased pain in many patients following surgery. Eighty percent of patients were satisfied with their results, correlating with younger age and improved neurological status, and 73% of families were satisfied, correlating with survival and pain relief.

Implications
Despite some design limitations recognized in the study, the authors' compassionate shift of focus toward satisfaction as a primary outcome in these terminally ill patients is to be commended and, really, defines the goal of palliation.

—The Editors

Material and methods

From April 2000 to November 2005, palliative surgery was performed in our institute and in related hospitals for 71 patients with metastatic spinal disease. Patients had a general medical status good enough to be acceptable surgical candidates and an expected survival of at least 3 months. The objectives of surgical intervention for all patients were palliative. Excisional procedures performed during this period, such as total en bloc spondylectomy [13], were excluded. Questionnaires were sent by mail to 71 patients and to their families in February 2006. Informed consent was obtained from the subjects and/or guardians. Three months later, simultaneous analysis was performed on collected questionnaires combined with the demographic data from the patients' hospital records. The questions included whether patients survived at the time of questionnaire completion, their survival period after surgery, their neurological status before and after surgery, their ambulatory period, the pain scale before and after surgery with or without adjuvant therapy, identification of the key person responsible for decision making, and the satisfaction of patients and their families. Data obtained from patient's records included the patient's age at surgery, their gender, the anatomic site of the primary carcinoma and of the metastatic lesion of the spine, and the nature of the operative procedures. Because of the sensitivity of the situation, it was decided not to undertake an additional telephone survey.

Factors evaluated as predicting variables were age at surgery, gender, anatomic site of the primary carcinoma, survival at the time of questionnaire completion, survival period after surgery, neurological status before and after surgery (Frankel grade), improvement of neurological status, ambulatory period, pain scale before and after surgery, improvement of pain scale with or without adjuvant therapy, key person for decision making, and satisfaction of patients and their families with treatment. The severity of palsy was classified according to Frankel's classification into five grades [14], and neurological status was graded before and after surgery. Patients with Frankel Grade E were neurologically normal; those with Grade D had useful motor function below the level of involvement, with incomplete sensory loss (ambulatory); those with Grade C had