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REVIEW

Systematic review of multidisciplinary teams in the management of lung cancer

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Summary
Background: In several countries, clinical practice guidelines for lung cancer recommend that multidisciplinary (MD) teams should be used to plan the management of all lung cancer patients. We conducted a systematic review to evaluate and critically appraise the effectiveness of multidisciplinary teams for lung cancer.
Materials and methods: Medline searches were carried out for the period 1984 to July 2007. We included any study that mentioned team working among specialists with diagnostic and curative therapeutic intent, where members of the team met at a specified time, either in person or by video or teleconferencing, to discuss the diagnosis and management of patients with suspected lung cancer. All study designs were included. We were particularly interested in whether multidisciplinary working improved survival but also considered other outcomes such as practice patterns and waiting times.
Results: Sixteen studies met the criteria for inclusion. Statistical pooling was not possible due to clinical heterogeneity. Only two of the primary studies reported an improvement in survival. Both were before-and-after designs, providing weak evidence of a causal association.

Evidence of the effect of MD teams was stronger for changing patient management than for affecting survival. Six of the studies reported an increase in the percentage of patients undergoing surgical resection or an increase in the percentage of patients undergoing chemotherapy or radiotherapy with curative intent.
Conclusion: This systematic review shows limited evidence linking MD teams with improved lung cancer survival. This does not mean that MD teams do not improve survival, merely that currently available evidence of this is limited. It seems intuitively obvious that MD teams should improve outcomes for lung cancer patients, but there are difficulties in conducting randomised trials to show this. The best way forward would be

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prospective evaluation of the effectiveness of MD teams as they are implemented, paying particular attention to collecting data on potential confounders.

Contents

1. Introduction

The typical lung cancer patient is in his or her 70s, is a smoker or ex-smoker, and has other co-existing conditions such as ischaemic heart disease or chronic obstructive pulmonary disease [1]. This means that management decisions are often difficult and cannot be informed solely by the results of randomised controlled trials in trial eligible patients or the recommendations contained in clinical practice guidelines.

An intuitively appealing way of planning the management of lung cancer patients is by multidisciplinary (MD) team meetings. This brings together relevant health-care workers with specialised knowledge of particular aspects of lung cancer diagnosis or treatment. In several countries, clinical practice guidelines for lung cancer recommend that MD teams should be used to plan the management of all lung cancer patients [2—5].

We conducted a systematic review of the effectiveness of MD teams for treating lung cancer. We were particularly interested in whether they improve survival, but also considered other outcomes such as practice patterns and waiting times.

2. Materials and methods

2.1. Eligibility criteria

Our primary objective was to investigate whether the available published studies show that MD teams improve survival of patients with lung cancer as compared to traditional models of care, although we also considered other outcomes. Because of the difficulty in performing randomised controlled trials in this setting, we included all study designs, as well as letters and conference abstracts.

A MD team meeting has been defined as a meeting of group of people of different health-care disciplines at a given time to discuss individual patients [6]. For lung cancer, the team usually consists thoracic physicians, thoracic surgeons, radiation oncologists, specialist radiologist, medical oncologists, pathologists, nursing and allied health staff and palliative-care specialists, although there are different local configurations. We therefore included any study that mentioned team working among specialists with diagnostic and therapeutic intent, where members of the team met at a specified time, either in person or by video or teleconferencing, to discuss the diagnosis and management of patients with suspected lung cancer.

2.2. Search strategy

Ovid Medline searches were carried out for the period 1984 to July 2007. References of the retrieved articles were also screened. Studies were identified with the search terms and combinations of ''lung neoplasm'', ''multidisciplinary'', ''multidisciplinary team'', ''multidisciplinary clinic'' ''multidisciplinary meeting'', and ''tumour board''.

All abstracts identified by the search were reviewed by two of us (MC and PG). Full papers that met the inclusion criteria were also reviewed independently by MC and PG, using a data extraction form specifically developed for the purpose. Any disagreements were resolved by discussion. We were not blinded to the journal or the authors of the article.