Abstract:

Lung considered a self-inflicted disease of the poor and the old, lung cancer has never had the emotional cache of other malignant disease. Nonetheless, it remains the commonest cause of cancer death in Ireland, and carry a particularly grim prognosis. Only a quarter of those diagnosed with lung cancer, will survive a year, with five-year survival just over 10%. While great strides have been made in improving outcomes in other malignant disease in this country notably haematological malignancies survival rates have not dramatically changed in lung cancer in the last fifteen years. Despite huge advances in our understanding of the molecular biology of lung cancer, and the consequent advent of targeted, targeted chemotherapy, along with concomitant advances in radiotherapy, surgical resection remains the most frugal, cost effective curative option. Less than one in three Irish lung cancer patients will undergo surgical resection improving survival here must surely focus on increasing this number.

Why do so few patients with lung cancer receive curative therapy? In Ireland, a large majority present with advanced, incurable disease, while others with theoretically resectable tumours are not medically fit for thoracic surgery. However, emerging evidence suggests other factors may be at play. A detailed exploration of why patients with potentially curable disease do not proceed to surgery was performed by Cykert and co-workers in a paper recently published in the Journal of the American Medical Association

In this study, the authors prospectively evaluated the management of a cohort of individuals with recently diagnosed, potentially curable lung cancer recruited from primary care, respiratory, oncology and thoracic surgery practices in North and South Carolina, USA. Only patients with a clinical diagnosis of stage I or II disease were considered for enrolment, and all were enrolled in the period between the diagnosis being made and the treatment plan being agreed. Following recruitment, a 106-item survey including questions regarding demographics, socio-economic standing, perceptions of patient-physician communication, religious faith, trust, attitudes toward cancer, and functional status was administered to each subject. Clinical data, including the date of any surgery, was obtained from a chart review four months after subject enrolment.

The primary study outcome was lung cancer surgery within four months of enrolment. 437 subjects were initially recruited; however, following preparative evaluation, only 398 patients remained eligible for surgery. Less than two-thirds (62%) of these individuals underwent surgical resection within the study period. There was a marked racial disparity among those who received operative management with a 66% of white subjects, as compared with only 55% of black patients a difference not explained by demographic, socio-economic or measured clinical factors. Interestingly, other cultural and psychological factors had a major impact on resection rates. Perhaps most strikingly, a strong belief in the power of religious faith and prayer was predictive of a failure to proceed to surgical treatment, as was a belief that surgery would lead to a significantly reduced quality of life. Less surprisingly, older and poorer people, as well as those with more co-morbid conditions were less likely to receive surgery. Finally, patients who professed a high-level of trust in their physician, who believed their diagnosis, had an understanding of lung cancer, and who had been adequately communicated with, were significantly more likely undergo resection of their tumour.

Several insights can be gleaned from this important and timely paper. Unsurprisingly, in their own discussion the authors focus on the double-digit difference between surgical management in white and black subjects. This is not the first paper to suggest that racial minorities may fare worse in lung cancer outcomes. Beach et al found a lower five year survival in African-American lung cancer patients, which seemed to be largely attributable to a lower rate of surgical resection. Similar results were found by Wirtzfeld et al at when they reviewed African-American, Hispanic and white patients. Their findings are certainly troubling, but their relevance to cancer outcomes in Ireland is uncertain as we are unaware of any Irish studies exploring this specific issue. Nonetheless, close attention clearly needs to be paid to lung cancer outcomes in both immigrant and indigenous minority populations.

Importantly, the authors also successfully identified potentially reversible factors that contributed to a failure to proceed to surgery. The benefits of patient education have been vividly demonstrated in other pulmonary diseases, notably asthma and chronic obstructive pulmonary disease. When 45% of patients believe exposure of the tumour to air during lung cancer surgery provokes metastasis, as in this study disease-specific educational deficits evidently exist. Similarly, it should come as little surprise that poor communication may act as a barrier to successful treatment. A substantial body of evidence suggests that effective doctor-patient communication improves patient satisfaction, increases compliance with treatment, and ultimately leads to better health outcomes.

Undoubtedly, the principal challenges in lung cancer care today are of prevention and early diagnosis. A discussion of the controversial area of lung cancer screening is beyond the scope of this editorial, but even outside of this, the widespread use of cross-sectional thoracic imaging may well be associated with an increased number of individuals diagnosed with potentially resectable disease. Cykert and colleagues nicely illustrate that even in these early-stage patients significant obstacles must be overcome to achieve cure. However, perhaps the central lesson that can be taken from this work is that traditional, intuitive, if somewhat neglected medical qualities - like empathy and communication - can lead to better outcomes in even the worst diseases.

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References