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Pericardial effusion and lung cancer: a retrospective analysis

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Introduction

Malignant pericardial involvement is present in 20% at post-mortems of cancer patients with up to 50% having a pericardial effusion (PErF). Common causes are lung and breast cancer. Survival of lung cancer and PErF is <5 months. Positive cytology and tamponade are adverse prognostic signs. We sought to retrospectively review lung cancer patients with pericardial effusions.

Methods

With Caldicott approval, in a search of computed tomography (CT) from January 2011 – August 2021 for 'lung cancer' AND 'pericardial effusion', 765 reports were found then reduced to 112. Basic demographics were collected. Continuous variables are presented as mean (range) and categorical variables as percentages where appropriate.

Results

Mean age was 70.6 years (44–91) and the male to female ratio was 56:56. Seven had no comorbidities, the others were all multi-morbid, with chronic obstructive pulmonary disease as the most common. Nineteen patients were clear of previous cancer. Many patients had lung cancers: 33 adenocarcinomas, 31 squamous cell, 13 small cell, 11 others (neuroendocrine, spindle cell or undifferentiated) and 25 had no pathology. PErFs were found on the first CT in 52 (time to death was mean 130 days (0–1,279) and median 70 days); the rest in scans showing disease progression (median time to progression 9 months; time to death was mean 160 days (0–1,138) and median 64 days; $p=0.42$). Twelve effusions were large (>20 mm). Eighteen echocardiographies were done, five drains were done for haemodynamic compromise (all at first presentation) and four fluid cytologies sent (all positive). Mean time to death in those five who required intervention was 15.1 day vs 148 days for whole cohort ($p=0.037$). There was no statistical difference for outcomes between cancer types.

Conclusion

PErF is associated with progressive disease and the need for intervention with mortality. Incidence is <3%. ■

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