

Abstract

Pulmonary Tuberculosis: A Comorbidity or Misdiagnosis of Primary Lung Cancer in Africa? [†]

Tinashe Adrian Mazhindu ^{*}, Ntokozo Ndlovu , Edith Matsikidze, Shirley Chibonda and Webster Kadzatsa

Department of Oncology, Medical Physics & Imaging Sciences, Faculty of Medicine & Health Sciences & Technology, University of Zimbabwe, Harare P.O. Box MP 167, Zimbabwe; ntokozosq@gmail.com (N.N.); edithmatsikidze@gmail.com (E.M.); shirley.katsande@gmail.com (S.C.); wkadzatsa@gmail.com (W.K.)

* Correspondence: atmazhindu@aibst.edu.zw

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Background: Globally, over 2 million new cases of lung cancer are diagnosed annually, representing about 11% of all cancers. In males and females, it is the leading cause of cancer-related deaths in 87 and 26 countries, respectively. Only 1% of lung cancer deaths are reported in Africa. In Zimbabwe, lung cancer accounts for less than 4% of annual cancer incidence. Investigating patients for probable lung cancer needs a high index of suspicion by physicians practicing in a high HIV/TB burden country and requires specialized radiology, pathology, surgery and oncology services in diagnosis and treatment. In this setting, the misdiagnosis and/or delayed diagnosis of primary lung cancer is highly probable as Africa goes through the disease burden transitional phase. This study was carried out to determine the prevalence of initial misdiagnosis of primary lung cancer as pulmonary tuberculosis and the resultant time delay in establishing a histological diagnosis.

Methods: A retrospective descriptive study reviewing medical records of patients who presented with pathologically confirmed primary lung cancer from January 2014 to 31 December 2018 was carried out at Parirenyatwa Group of Hospitals Radiotherapy and Oncology Centre. This is the largest cancer treatment centre in Zimbabwe.

Results: A total of 73 patients were eligible for review and males accounted for 58% of all new cases. A pulmonary TB diagnosis in the preceding 12 months before a diagnosis of primary lung cancer was identified in 53% of patients. The median time delay to diagnosis was 8.37 months (range: 1–37 months). Only 11 patients (15.1%) had lung cancer diagnosed within 3 months of the initial presentation to a health care centre. A diagnosis of tuberculosis (TB) is associated with a delay of >7 months in lung cancer diagnosis ($p = 0.001$). At the time of diagnosis, 77% of patients had stage IV disease.

Conclusion: Most lung cancer patients are initially misdiagnosed as having TB, and this results in a significant time delay to diagnosis. The majority of patients had distant metastases at diagnosis. There is a relationship between the prevalent lung cancer misdiagnosis and the high burden of HIV/TB in Zimbabwe.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/proceedings2024100002/s1>, Conference Poster: Pulmonary tuberculosis—Misdiagnosis of primary lung cancer in a high TB burden setting.

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