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Analysis of bronchoscopies performed at Chris Hani Baragwanath hospital between 2011–2018

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Abstract

Background

A definitive diagnosis of respiratory disease is often elusive without tissue biopsy. Bronchoscopy is a valuable procedure to both visualise and sample endobronchial lesions and lung parenchyma.

Objectives

We describe patient demographics, indications for, and diagnosis of, patients undergoing fibreoptic bronchoscopy at Chris Hani Baragwanath Academic Hospital (CHBAH) over an 8-year period (2011-2018). We also describe associations between demographic characteristics and diagnosis.

Methods

This is a retrospective record review of patients who had undergone fibreoptic bronchoscopy at CHBAH. Demographic, clinical and histopathological data were collected.

Results

Bronchoscopy records were retrieved for 830 patients. Two thirds of patients were male; the mean (SD) age of patients was 56.2 (13.3) years. Twenty-two percent of patients who had bronchoscopy were seropositive for HIV, with a median cluster of differentiation 4 (CD4) cell count of 233 cells/mm^3 (IQR: 85-434). Bronchoscopies were performed mostly for suspected endobronchial lesions (52%) and pulmonary infiltrates (12%). Endobronchial biopsy was performed in half of patients undergoing bronchoscopy.

The most common diagnosis was primary lung malignancy, found in 39% of patients. Squamous cell carcinoma was the commonest subtype (43%) and adenocarcinoma was diagnosed in 31%. Increasing age was significantly associated with a diagnosis of malignancy [OR 95% CI, 1.05 (1.04-1.06)] $p<0.001$. Women and HIV positive patients were less likely to be diagnosed with malignancy compared to men and HIV negative patients. Our study revealed that the complication rate during bronchoscopy was 2.16%.

Conclusion

In this retrospective study, flexible bronchoscopy was found to be a useful tool aiding the diagnosis of respiratory diseases and had a low complication rate. An endobronchial lesion was detected in 44% of the patients undergoing bronchoscopy and the commonest diagnosis was primary lung cancer.

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