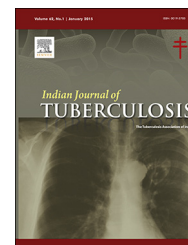


Available online at www.sciencedirect.com

ScienceDirect

journal homepage: <http://www.journals.elsevier.com/indian-journal-of-tuberculosis/>

Original Article

Etiology of hemoptysis: A retrospective study from a tertiary care hospital from northern Madhya Pradesh, India

Saurabh Kumar Singh^{a,*}, Kamlesh K. Tiwari^b^a Assistant Professor, Department of Pulmonary Medicine, Gajra Raja Medical College and Jaya Arogya Group of Hospitals, Gwalior, MP, India^b Professor, Department of Pulmonary Medicine, Gajra Raja Medical College and Jaya Arogya Group of Hospitals, Gwalior, MP, India

ARTICLE INFO

Article history:

Received 3 February 2015

Accepted 29 February 2016

Available online xxx

Keywords:

Hemoptysis
Tuberculosis
Bronchitis
Bronchiectasis

ABSTRACT

Objective: To evaluate the various etiologies of hemoptysis and outcome in an Indian cohort.
Material and methods: Retrospective analysis of patients admitted with complaints of hemoptysis in the department of Pulmonary Medicine between April 2010 and March 2013. We categorized the patients according to various etiologies and according to the grades of hemoptysis.

Results: Three hundred and forty-six patients were included in the study. Of these, 214 (67%) were men and 142 (33%) were women. Tuberculosis (79.2%) accounted for majority of cases of hemoptysis. Other causes of hemoptysis were lung cancer (7.2%), bronchitis (4.6%), and bronchiectasis (3.5%). Moderate grade (73.4%) of hemoptysis was the frequent mode of presentation.

Conclusion: Hemoptysis is the most frequent presentation of tuberculosis in India. It may be the presentation of healed pulmonary tuberculosis. Moderate amount of hemoptysis is commonly seen in the general population.

© 2016 Tuberculosis Association of India. Published by Elsevier B.V. All rights reserved.

1. Introduction

Bleeding from the lungs or from tracheobronchial tree results in the coughing out of blood from the mouth and is referred as hemoptysis. It is the symptom per se not the disease and it required further evaluation to identify the disease that causes it. The level of mildness the hemoptysis may be is always of concern for the patient. Disease may range from infection to malignancy.

Various diseases like bronchiectasis, pulmonary tuberculosis, and lung cancer may cause hemoptysis. It is the geographical boundaries that result in the variation of the

causes of the hemoptysis. Pulmonary tuberculosis is still the commonest cause of hemoptysis in developing countries like India,¹ while in developed countries, bronchitis and bronchiectasis are topping the charts in the causes of hemoptysis.

Hemoptysis is also classified as mild, moderate, and massive. This division is based on the amount of blood expectorated in the last 24 h i.e., mild (<100 ml/24 h), moderate (100–400 ml/24 h), and severe (>400 ml/24 h or >30 ml/h).¹ But any amount of hemoptysis that endangers the life of patient should be referred as massive or severe hemoptysis.

The purpose of the study was to evaluate the relative frequency of the causes of hemoptysis in an Indian cohort and to see whether the disease pattern has shown changes in the

* Corresponding author.

E-mail addresses: doctorsaurabhsingh@yahoo.co.in, doctorsaurabhsingh@gmail.com (S.K. Singh).<http://dx.doi.org/10.1016/j.ijtb.2016.02.007>

0019-5707/© 2016 Tuberculosis Association of India. Published by Elsevier B.V. All rights reserved.

same progression as they were calculated in the past few decades in other developed countries.

2. Material and methods

This was a retrospective study. We analyzed the data of a patient who was admitted with complaints of hemoptysis in the Department of Pulmonary Medicine of Gajra Raja Medical College, Gwalior, India from April 2010 to March 2013. The study was approved by the ethical committee of the college.

Based on the examination of the medical record, patient's demographic characteristics, including age and sex, were noted. Medical records were analyzed to know the etiology of disease, smoking history, chest radiography and CT scan, sputum smear test and culture, and bronchoscopic and histopathological examination. Pulmonary neoplasm was diagnosed on the basis of histopathological examination. Patients were divided into three groups according to the amount of hemoptysis they had produced i.e., mild (<100 ml), moderate (100–400 ml), and severe (>400 ml). On the basis of etiology of hemoptysis, patients were further divided into tubercular and nontubercular group. Nontubercular group included pulmonary neoplasm, bronchitis, bronchiectasis, and other causes.

All patients were treated conservatively for the hemoptysis. Conservative treatment included the cough suppressant, along with absolute bed rest, mild sedatives if needed, and other supportive measures (protection of airways, endotracheal intubation, whole blood/blood products transfusion, lateral decubitus positioning making the bleeding site in lower position, and tranexamic acid) were given. Along with it, the primary cause was treated according to the management protocol for that disease.

3. Results

During the study period, 346 cases of hemoptysis were admitted. Of these, 214 (67%) were men and 142 (33%) were women. Mean age of the patients was 40 ± 12.6 years. Two hundred and seventy-four (79.2%) patients were diagnosed to have tuberculosis. There were 208 patients of active tuberculosis, out of which, 174 patients had sputum for AFB positive.

Table 1 – Etiology of hemoptysis in tubercular patients.

Diagnosis	No. of patients
Active tuberculosis	208 (60.1%)
AFB positive	174 (50.28%)
AFB negative	34 (9.8%)
Inactive tuberculosis	66 (19.1%)
Total	274 (79.2%)

Table 2 – Etiology of hemoptysis in nontubercular patients.

Diagnosis	No. of patients
Lung cancer	25 (7.2%)
Bronchitis	16 (4.6%)
Bronchiectasis	12 (3.5%)
ABPA	2 (0.6%)
Pneumonia	9 (2.6%)
Lung abscess	2 (0.6%)
Idiopathic	2 (0.6%)
Cardiac	2 (0.6%)
Antiplatelet drugs	1 (0.3%)
Pulmonary hypertension	1 (0.3%)
Total	72 (20.8%)

However, 66 patients had inactive tuberculosis (Table 1). There were 18 cases of tuberculosis that developed hemoptysis during the course of antitubercular treatment. All of them were bacteriologically negative cases of tuberculosis at the time of hemoptysis. Lung malignancy is the second commonest cause of hemoptysis, and all the cases were of primary malignancy. One case was diagnosed to have pulmonary hypertension on the basis of Doppler echocardiography with normal chest CT report.

Hemoptysis in majority of the patients was of moderate degree (Table 2). Severe hemoptysis was seen in 5.2% cases only. Mean duration of the stay for the hemoptysis patients was 12 ± 5.3 days. Mortality rate among hemoptysis patients was 3.4% (12); apart from 3 cases all of the other deaths were related to primary disease process. All patients were treated conservatively. Six patients required whole blood transfusion, while in 10 cases, packed red blood cells were used. None of the patients underwent bronchial artery embolization or surgery (Table 3).

Table 3 – Grading of hemoptysis.

Diagnosis	Mild	Moderate	Severe	Total
Tuberculosis	22 (8%)	237 (86.5)	15 (5.5%)	274 (100%)
Lung cancer	21 (84%)	3 (12%)	1 (4%)	25 (100%)
Bronchitis	11 (68.8%)	4 (25%)	1 (6.2%)	16 (100%)
Bronchiectasis	10 (83.3%)	2 (16.7)	0 (0%)	12 (100%)
ABPA	2 (100%)	0 (0%)	0 (0%)	2 (100%)
Pneumonia	4 (44.4%)	4 (44.4%)	1 (11.1%)	9 (100%)
Lung abscess	0 (0%)	2 (100%)	0 (0%)	2 (100%)
Idiopathic	2 (100%)	0 (0%)	0 (0%)	2 (100%)
Cardiac	2 (100%)	0 (0%)	0 (0%)	2 (100%)
Antiplatelet drugs	0 (0%)	1 (100%)	0 (0%)	1 (100%)
Pulmonary hypertension	0 (0%)	1 (100%)	0 (0%)	1 (100%)
Total	74 (21.4%)	254 (73.4%)	18 (5.2%)	346 (100%)

Download English Version:

<https://daneshyari.com/en/article/3403478>

Download Persian Version:

<https://daneshyari.com/article/3403478>

[Daneshyari.com](https://daneshyari.com)