

Original article:

Study of complications of bronchiectasis in Rural Population

¹Dr Avinash Jadhavar , ²Dr Priyanka Dahitale*

¹Assistant Professor, Department of Medicine, Rural Medical College, Loni

²Sainath Hospital, Shirdi

Corresponding author *

Abstract

Introduction: The current increase in tuberculosis rates is directly related to insufficient and irregular medication. Additionally, irregular and inadequate treatment, the cessation of medication shortly after symptom improvement and a lack of check-ups after treatment are factors accelerating recurrent pulmonary infection in developing countries.

Material and methods: The study was carried out in Pravara Rural Hospital, constituent of Rural Medical College, Loni. The sample size estimation was carried by the help of expert. The study was approved by IEC .

Results: In present study, 11(22%) patients had cor pulmonale associated with chronic bronchiectasis. Recurrent chest infection (46%) is a major complication in this study. Only one case presented with CCF and another one with type II respiratory failure

Conclusion: Recurrent chest infections were commonest causative factors for hospitalization in bronchiectasis in Rural population.

Introduction:

The current increase in tuberculosis rates is directly related to insufficient and irregular medication. Additionally, irregular and inadequate treatment, the cessation of medication shortly after symptom improvement and a lack of check-ups after treatment are factors accelerating recurrent pulmonary infection in developing countries. As the disease progresses, physical activities become increasingly limited, patients fail to thrive and ultimately they suffer from social deprivation, intrinsic depression and respiratory failure. Therefore, bronchiectasis is still a major cause of morbidity and mortality in developing countries.^{1,2}

Material and methods:

The study was carried out in Pravara Rural Hospital, constituent of Rural Medical College, Loni. The sample size estimation was carried by the help of expert. The study was approved by IEC .

Criteria for Inclusion:

- Patients with signs and symptoms suggestive of bronchiectasis.
- Patients with age more than 12 years.
- Confirmation of diagnosis by radio-imaging study.

Criteria for Exclusion:

- Age less than 12 years.

- Congenital cause.

All patients were explained about the nature of the study and informed consent was taken from every patient.

- History & examination findings were recorded as per proforma.
- Thus, entire data collected after study complied and conclusions are drawn.

Results:

In present study, 11(22%) patients had cor pulmonale associated with chronic bronchiectasis. Recurrent chest infection (46%) is a major complication in this study. Only one case presented with CCF and another one with type II respiratory failure.

Table No.1: Complications of bronchiectasis

COMPLICATION	NO.OF CASES (%)
Cor Pulmonale	11 (22%)
Cor pulmonale with CCF	1 (2%)
Recurrent chest infection	23 (46%)
Respiratory failure	1 (2%)
Hemoptysis	5 (10%)
Respiratory cachexia	12 (24%)

Discussion:

Recurrent chest infection (46%) was identified as most common complication; which was more than comparative study may be due to small sample size. 22% of cor pulmonale and 24% of respiratory cachexia were second most common complications in bronchiectasis. Complications such as lung abscess, empyema, cerebral abscess or long term complication such as amyloidosis was detected in any case.³

Chest X-ray: Chest X-ray an important tool for investigation of bronchiectasis in recourses poor setting because the characteristic honeycomb/ring shadows/tram tracks/increased liner marking with classical clinical manifestations confirmed diagnosis. Therefore in investigating a patient in limited recourses, we suggest that chest radiograph should be employed as the next investigating tool after targeted history and clinical examination. Majority of patents were showed unilateral (66%) lesion and 34% of bilateral lesion on chest x-ray and HRCT; most type of bronchiectasis was cylindrical.⁴

Bhatta N.⁵ *et al*; had 35% of unilateral and 20% of bilateral chest findings on chest x-ray.**HRCT:** High resolution CT scan was done in 15 cases (30%) because of cost factor. In which 10 patients showed unilateral lesion and 5 patients showed bilateral lesion. **Type:** In present study, tubular or cylindrical (64%) bronchiectasis was most common type of bronchiectasis on the basis radio imaging study (x-ray, HRCT). 54% of patient had cystic type of bronchiectasis.

Conclusion:

Recurrent chest infections were commonest causative factors for hospitalization in bronchiectasis in Rural population.

References:

1. Kapur N, Chang AB. Oral non steroid anti-inflammatories for children and adults with bronchiectasis. *Cochrane Database Syst Rev* 2007;4: CD006427.
2. Altenburg J, de Graaff CS, van der Werf TS, et al. Immunomodulatory effects of macrolide antibiotics— part 2: advantages and disadvantages of long-term, low-dose macrolide therapy. *Respiration* 2011;81(1):75–87.
3. Giamarellos-Bourboulis EJ. Macrolides beyond the conventional antimicrobials: a class of potent immunomodulators. *Int J Antimicrob Agents* 2008; 31:12–20.
4. Fujimoto T, Hillejan L, Stamatis G. Current strategy for surgical management of bronchiectasis. *Ann Thorac Surg* 2001;72:1711–5.
5. Bhatta N, Dhakal SS, Rizal S, Kralingen KWV, Niessen L; Clinical spectrum of patients presenting with bronchiectasis in Nepal:Evidence of linkage between tuberculosis, tobacco smoking and toxic exposure to biomass smoke *Kathmandu University Medical Journal* (2008), Vol. 6, No. 2, Issue 22, 195-203.