



APPROACH TO ETIOLOGIC DIAGNOSIS OF PLEURAL FLUID

Medicine

Dr. Anjali P. Ghare Associate Professor, Department of Respiratory Medicine Narayan Medical College Sasaram, Jamuhar. (India)

Dr. Vikash Kumar* Asst. Professor Department of Respiratory Medicine Narayan Medical College Sasaram, Jamuhar. (India) *Corresponding Author

ABSTRACT

INTRODUCTION : Pleural effusion is unusual amount of fluid that accumulates around the lung in pleural space_ Various conditions can lead to accumulate abnormal pleural fluid when the treatment target is likely to drain it

AIM : To study different causes and treatment modalities for patients of pleural effusion

MATERIALS AND METHOD : In the institute during the period from May 2017 to April 2018, 80 patients studied with detailed history, lab investigations and treatment given documented. All patients followed short term approximately two weeks in detailed.

RESULTS : Tuberculosis was most common cause found other than malignant Para pneumonic effusion, C.C.F. anemia, hyperproteinemia.

CONCLUSION : Most patients presented with signs and symptoms of cardio- respiratory distress. pleural fluid analysis is most important finding of diagnosis than FNAC in needed patients for confirmation of malignancy.

KEYWORDS

Tuberculosis, Pleural effusion, C.C.F, Para pneumonic effusion, anemia, hypoproteinemia malignancy.

INTRODUCTION

In India, Unlike the western countries, Tuberculosis pleural effusion common 5 % of patient next to tuberculous lymphadenitis pleural fluid may cause due to variety of disorder of lung, pleura, systemic disorder etc. It comes common in respiratory medicine unit.^(2,6)

THE PATHOPHYSIOLOGY FOR UNDERLYING ACCUMULATION OF FLUID

Increase Pulmonary capillary pressure. Decrease Plasma oncotic pressure. Increase permeability of pleural membrane and imbalance between formation and absorption of Fluid^(1,2). Exudates and transudates are best differentiated by light three criteria 1) Ratio of pleural fluid protein to serum protein > 0.5 2) Ratio of pleural fluid to the serum lactate dehydrogenase (LDH) > 0.6 3) Absolute value of pleural fluid LDH > 2/3 of the upper normal limit for serum. While exudates meet one or more of three criteria⁽⁴⁾.

AIMS-

To study different etiological causes for pleural effusion. To study treatment modalities.

MATERIALS AND METHODS

A prospective study conducted during May 2017 to April 2018 upon 80 Nos. of patients. Patients with written consent and inclusion criteria selected for study. All patients asked history about signs & symptoms and documented with associated illness. Routine Laboratory investigation done. Pleural tap fluid sent to pathological, microbiological and biochemical test. X-ray & CT scan done in home diagnosis could not be established by above Laboratory study. Patients were followed up for pleural fluid presence if necessary. Ultra sonography for detection of small amount of fluid detection till recovery.

RESULTS

-Eighty patients of pleural effusion included in the study. pleural fluid study reveals most were exudative with increase protein, decrease glucose and increase lymphocytes. Few with increase polymorphs. Pleural fluid AFB +ve in 10% and bacteria in 5% These above are possible for etiological diagnosis. On the basis of laboratory studies remaining patients advised for CT scan with contrast for diagnosis & those who needed for bronchoscopy & FNAC for confirmation of for diagnosis & related cause.

Table showing diagnostic analysis after examination of pleural fluid.

Detected Conditions	No. of patients	Percentage
Anemia & hyoeroriteinemia	5	6.25%
CCF	5	6.25%
Para pneumonic effusion	10	12.5%
Malignancy	6	7.5%
Tuberculosis	50	62.5%

Pleural fluid tapping done & in tuberculous effusion patients anti TB drugs started in Para pneumonic effusion antimicrobial therapy started. In patients of anemia, hyperporteinemia & CCF treatment for cause given. Malignancy patients refer to higher center for radiotherapy and chemotherapy.

DISCUSSION

In this study majority patients presented with symptoms of cardio respiratory distress Tuberculosis being common cause in most of the patients. In our study pleural fluid with ADA examination by lights criteria were remarkably effective in achieving goal^(4,9). All pleural fluid study with 60% exudates & 40% transudates⁽¹⁰⁾ X-ray & CT thorax with contrast played major role in diagnosing malignancy. Pleural fluid tapping & treatment for cause was management for pleural criteria^(1,5,8). This study matches to "Study of 100 cases of pleural effusion with reference diagnostic approach"⁽³⁾.

CONCLUSION :

Form our study pleural fluid examination with ADA & lights criteria is most important for diagnosis of pleural effusion. Tuberculosis is major common cause for pleural effusion. Treatment for cause is treatment modality for successful outcome.

REFERENCES

1. Crofton & Douglas's respiratory diseases Anthony sedation Douglas's sedation A Gordon Leitch 5th edition.
2. Gopi A madhavan SM Sharma Skshhnsa diagnosis and treatment TB effusion in chest 2007 131 : 880/9.
3. International journal of advances in medicine Ranjan Parikh, Jaydeep Odhwani.
4. Light R.W. clinical practice pleural effusion N Erg J Med 2002 ; 1971-7.
5. Manual on tuberculosis & jung diseases A practical approach , editor V.K. Jaydeep , 1st edition 2009 page 251.
6. Sharma S.K. Mohan A, extra pulmonary Indian J med Res 2004; 120:316-53.
7. Textbook of pulmonary and extra pulmonary tuberculosis 4th edition S.Styashri. page No.274.
8. Textbook pulmonary medicine editor Jostna M Joshi ; 1st edition 2009 Jaypee page no.181.
9. The care of medical patients 5th edition , Fread F. Ferri MD page no.67.
10. Tuberculosis editor S.K.Shrama, Jaypee brothers 1st edition 2001.