International Journal of Allied Medical Sciences and Clinical Research (IJAMSCR)

ISSN:2347-6567

IJAMSCR |Volume 6 | Issue 3 | July - Sep - 2018
www.ijamscr.com

Case Report *Medical research*

A case report on recurrent infantal bronchopneumonia

K.Sravani[1*], Dr.P.Venkata Ramana[2], Y.Parimala[1], M.Balaji Naik[1], S. Mohammed Ishak[1]

[1]*Pharm-D V Year, Department Of Pharmacy Practice, P.Rami Reddy Memorial College Of Pharmacy, Kadapa*

[2]*Assistant Professor, Department Of Pharmacy Practice, P.Rami Reddy Memorial College Of Pharmacy, Kadapa*

***Corresponding Author: K.Sravani**

Email id: ksravani7177@gmail.com

ABSTRACT

Introduction

Bronchopneumonia is an acute bacterial infection of terminal bronchioles characterised by purulent exudation which extends into surrounding alveoli through endobronchial route resulting in patchy consolidation.

Case presentation

A 1year male child weighing 7.3kgs was admitted in paediatric intensive care ward with chief complaints of fever & shortness of breath since morning, cold & cough since 2days,vomiting(1 episode) since morning & difficulty in breathing. Patient has history of similar complaints in the past 1wk back & was hospitalised for about 5days. Based on the subjective& objective evaluation the patient was diagnosed with Bronchial Pneumonia and the treatment was given accordingly.

Conclusion

Better assessment is necessary for implementation of safe and effective treatment for each individual patient. In order to prevent serious complications of this disease, close monitoring of the patients during treatment course including culture sensitivity tests, creating awareness, recognition of the problem and careful management of all patients is essential.

Keywords: Bronchopneumonia, Infant, Morbidity, Mortality.

INTRODUCTION

Bronchopneumonia is an acute bacterial infection of terminal bronchioles characterised by purulent exudation which extends into surrounding alveoli through endobronchial route resulting in patchy consolidation. The Epidemiological status of this disease includes 29% of paediatric death worldwide, 158 million cases per year & 3millions deaths per year. Causes of recurrent pneumonia includes) Local bronchial obstruction which includes intraluminal (foreign body), intramural (adenoma, carcinoma, stenosis), extramural (compression by lymph nodes), ii) Diffuse bronchopulmonary disease (Bronchiectasis, Cystic fibrosis, chronic bronchitis, chronic sinusitis with post nasal drip, Recurrent pulmonary infarcts),iii)Non respiratory disease which includes

recurrent aspiration(neuro muscular & oesophageal problems, epileptics) & immune deficiency state [1]. Pathophysiology includes micro organisms gain access to the lower respiratory tract by 3 routes they may be inhaled as aerosolised particles; they may enter the lung via the blood stream from an extra pulmonary site of infection or aspiration of oropharyngeal contents may occur. Lung infection with viruses suppresses the bacterial clearing activity of the lung by impairing alveolar macrophage function & mucociliary clearance. The majority of pneumonia occurs due to s.pneumoniae (pneumococcus), M.pneumoniae, others include legionella, C.Pneumoniae. Gram negative aerobic bacilli & s. aureus are also the leading cause of pneumonia. Anaerobic bacteria are the most common etiologic agents in pneumonia that follows the gross aspiration of gastric/oropharyngeal contents. In the paediatric age group, most pneumonia are due to viruses, especially RSV, Para influenza & adeno virus. Pneumococcus is the most common bacterial cause [2]. Signs & Symptoms include tachycardia, rapid respiratory rate(>30 cpm), fever, flushed dry skin, confusion, rust coloured sputum, dyspnea, chest wall retractions & grunting respirations, tachypnea, common cold, malaise, fatigue, inspiratory crackles during lung expansion, signs of consolidation on second week. Diagnosis includes chest x-ray, sputum microscopy & culture, blood chemistry & haematology, blood culture [3]. Management includes Hospitalisation, Fluids (IV in those with severe illness or vomiting),Oxygen(if initial blood gases indicate hypoxemia), Antibiotics for mild condition include Amoxycillin 500mg tds po, Azithromycin 500mg qds po; for severe condition include IV co-amoxiclav 1.2gm tds, cefuroxime 1.5gm tds, cefotaxime 1gm tds or ceftiaxone 2gm od+ either IV erythromycin 500mg qds or clarithromycin 500mg bd. Complications include abscess formation with in the chest wall, meningitis or abscess formation in the brain.

CASE

A 1year male child weighing 7.3kgs was admitted in paediatric intensive care ward with chief complaints of fever & shortness of breath since morning, cold & cough since 2days,vomiting (1episode) since morning & difficulty in breathing. Patient has history of similar complaints in the past 1wk back & was hospitalised for about 5days.On general examination, the patient was conscious& coherent & his physical examination include HR:132Bpm,RR:36 Cpm. On systemic examination RS: B/L crepts+ over post lung fields, supra stern alretractions+, chest wall retractions+, subcoastal retractions+ &wheeze+. His laboratory investigations shows + ve for CRP & chest x-ray report show multiple patchy areas of infection, usually in both lungs& mostly at the lung bases. Based on the subjective& objective evaluation the patient was diagnosed with Bronchial Pneumonia. The treatment was given as follows: On day1:Inj.ceftrixone in a dose of 350mg was given twice a day, Inj.Amikacin in a dose of 100mg was given twice a day, Syp.Paracetamol in a dose of 4ml was given thrice in a day, Syp.Ambroxol in a dose of 2ml was given thrice in a day, Syp.Salbutamol in a dose of 2ml was given thrice in a day. On day2: Same medication was continued &oxygen inhalation @5 lit/min sos & Neb. with asthalin 0.5cc in 2ccNS 6hrly was added. On day 3: Same medication was continued & Neb. with budecort 0.5cc in 2ccNS 12hrly was added. On day 4: Same medication was continued & newly given drugs are Inj.Hydrocortisone in a dose of 40mg was given whenever necessary & Syp.Azithromycin in a dose of 70mg was given once in a day. On day5: Same medication was continued& Inj.Hydrocortisone was stopped. On day6:Inj.ceftriaxone was kept with hold, Inj.Amikacin in a dose of 50mg was given twice in a day, Syp.Paracetamol in a dose of 4ml was given whenever necessary, Syp.Ambroxol & SYP.Salbutamol were given in dose of 2ml thrice in a day, Syp.Azithromycin in a dose of 70mg was given once in a day, Neb. with budecort 0.5 cc in 2cc NS 6hrly,Inj:Piptaz in a dose of 700mg was given thrice in a day , Inj.Vancomycin given in dose of 75mg in 100ml NS over 6hrly was given QID& oxygen inhalation@5 lit/min was stopped. On day7: Same medication was continued& syp.Salbutamol and Inj.Ceftriaxone was stopped. On day 8: Same medication was continued. On day 9: Same medication was continued but Inj.Amikacin& Syp.Azithromycin were stopped. On day 10: Same medication was continued & Tab.Prednisolone in a dose of 5 mg was given whenever necessary and it is newly added. On day 11:- same medication was continued but Tab.

Prednisolone was stopped and inj. Ondansetron of 1cc sos was newly added. On day 12 13 & 14:- same medication was continued. On day 15:- The patient was discharged with the following medication:- syp. Cefpodoxime in dose of 3.5ml was given thrice in a day, syp. Ambroxol in dose of 2.5ml was given thrice in day, syp. CPM in dose of 2ml was given thrice in a day and syp. Paracetamol in dose of 5ml was given QID.

DISCUSSION

It is very important to note that safe and effective treatment of recurrent or persistent pneumonia in children is based on firmly establishing an etiologic diagnosis. Empiric treatment using repeated courses of antibiotics and hope is unlikely to yield cure or even good control of most of these processes and is likely to result in more cost to the patient's health and pocketbook [4]. Applied in a staged and systematic way, the diagnostic tools currently available should enable the clinician caring for children to diagnose most of their patients with recurrent or persistent pneumonia. Consultation with a pediatric pulmonologist will generally speed up the process and help with difficult or confusing cases. Since effective therapy is available but differs greatly from one etiology to another, early accurate etiologic diagnosis is extremely important. [5]

Not all the children with pneumonia receive chest radiographs, but a radiograph demonstrating pulmonary infiltrates is essential in defining an episode of pneumonia in cases of suspected persistent or recurrent pneumonia [6, 7]. Comparison should be made to previous films to confirm the diagnosis of pneumonia and assess if the consolidation is localised to a single lobe or whether multifocal disease is present as this has implications on the differential diagnosis and subsequent investigations. Unlike adults, there is no indication for routine follow up of all otherwise healthy children with uncomplicated community acquired pneumonia. Those with clinical evidence or suspicion of recurrent or persistent pneumonia or who are immune compromised should have repeat films done at least 2-3 weeks after commencement of treatment. Round pneumonia is common in children and simulates a pulmonary mass. In these cases, follow up radiography is important to confirm resolution and to exclude the presence of an underlying mass. [8, 9, 10].

CONCLUSION

Better assessment is necessary for implementation of safe and effective treatment for each individual patient. In order to prevent serious complications of this disease, close monitoring of the patients during treatment course including culture sensitivity tests, creating awareness, recognition of the problem and careful management of all patients is essential, because the growing child organs is in development stage if not providing close monitoring during treatment course, which may lead to permanent disability, morbidity, mortality. It is equally important to raise the awareness, especially of paediatricians, of the recent advances made in reaching a diagnosis for aetiology of recurrent pneumonia in children if not clarified by conventional tests. Number of factors must be considered if a patient did not respond to treatment. These include development of empyema or bacterial resistance or non-bacterial aetiology like viral, or Aspiration of foreign body or food.

REFERENCES

[1]. Aspi F.Golwalla; Golwalla's Medicine For Students; The National Book Depot; 24, 101-104.
[2]. Joseph T.Dipiro; Pharmacotherapy Hand Book; Mc Graw Hill; 6, 425,430.
[3]. Parthasarathi; A Textbook Of Clinical Pharmacy Practice; Universities press; 2, 168.
[4]. Vaughan D, Katkin JP; Chronicand recurrent pneumonias in children. Semin Respir Infect 17, 2002, 72-84.
[5]. Wald ER; Recurrent andnonresolving pneumonia in children. Semin Respir Infect 8, 1993, 46-58.
[6]. Mu LC, Sun DQ, He P; Radiological diagnosis of aspirated foreign bodies in children: review of 343cases. J Laryngol Otol 104, 1990, 778-782.
[7]. CohenSR; Unusual presentations and problems created by mismanagement offoreign bodies in the aerodigestive tract of the pediatric patient. Ann OtolRhinol Laryngol 90, 1981, 316-322.

[8]. Harries ML, Albert DM; Bronchoscopic foreign bodies: overcoming granulation tissue. J Otolaryngol 22, 1993, 134.

[9]. MoskowitzD, Gardiner LJ, Sasaki CT; Foreign-body aspiration. Potentialmisdiagnosis. Arch Otolaryngol 108, 1982, 806-807.

[10]. Taha Ibrahim yousif *et al*; Approach to a child with recurrent pneumonia. Sundanese journal of paediatrics 15(2), 2015, 71-77.

How to cite this article: K.Sravani, Dr.P.Venkata Ramana, Y.Parimala, M.Balaji Naik, S. Mohammed Ishak. A case report on recurrent infantal bronchopneumonia. Int J of Allied Med Sci and Clin Res 2018; 6(3): 744-747.

Source of Support: Nil. **Conflict of Interest:** None declared.