

Adulthood Varicella Zoster Complicated by Spontaneous Pneumothorax

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ABSTRACT

Varicella zoster (chicken pox) is a self-limiting viral infection spread by droplet infection. The disease is more severe in adults when compared to children. Varicella pneumonia is a serious complication of adulthood varicella. Spontaneous pneumothorax in varicella is a rare complication with only a few cases reported till date.

Keywords: Varicella Zoster , Chicken Pox , Pneumonia, Pneumothorax

INTRODUCTION

Chickenpox or varicella is a contagious disease caused by the varicella-zoster virus that spreads through droplet infection. The virus is responsible for chickenpox (usually primary infection in non-immune hosts) and herpes zoster or shingles (following reactivation of latent infection).¹ It is typically associated with a rash that turns into itchy, fluid-filled blisters that eventually turn into scabs. It is accompanied by fever, fatigue, pharyngitis, and headaches which usually last five to seven days. Common complications include pneumonia, brain inflammation, and bacterial skin infections¹. The disease is more severe in adults than in children leading to increased morbidity and mortality. Pneumothorax has been listed as a rare complications of varicella zoster.² On literature review we found that there have been only a few cases of reported spontaneous pneumothorax with varicella pneumonia infection.

CASE REPORT

29 year old female with no known co morbidity, was diagnosed to have chicken pox from outside hospital and started on oral anti-viral medication (acyclovir) 6 days ago presented to casualty with complaints of progressive breathing difficulty of 2 days duration. It was associated with high grade fever of 2 days duration. Patient had no significant past or family history of diseases. On examination, patient was febrile and had tachycardia, tachypnoea. Patient was maintaining a saturation of 94 % with 5 litres of oxygen. Respiratory system examination revealed reduced air entry over left side with ronchi and crepitations over the right lung field. Chest X-ray taken showed a left sided pneumothorax (Figure 1). CVTS opinion was sought, and ICD was inserted following which her breathlessness had reduced. Patient was started on broad spectrum antibiotics (Pipracillin and tazobactam) in view of her high CRP. CT thorax showed left lung volume loss with hydropneumothorax with fibrosis, collapse and consolidatory changes (Figure 2). Urine culture showed E.

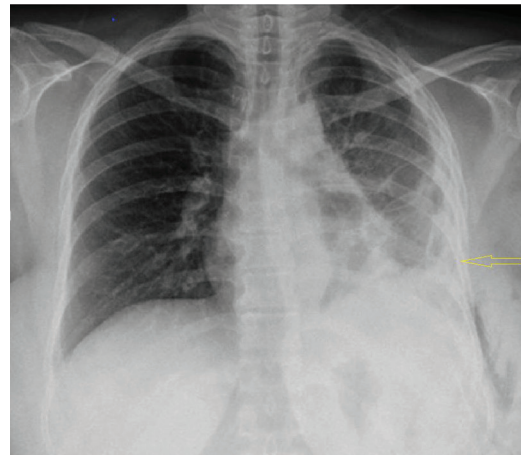


Figure-1: Chest X ray showing left sided pneumothorax with consolidation.

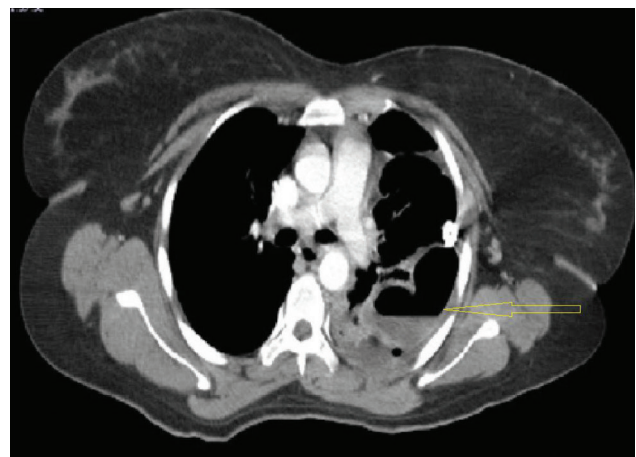


Figure-2. CT thorax showed left lung volume loss with hydropneumothorax with fibrosis, collapse and consolidatory changes

coli which was sensitive, and antibiotics were continued. Blood cultures were negative. Pleural fluid cytology was negative for malignant cells and culture was negative. Video assisted thoracoscopic surgery showed severe pleural

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How to cite this article: Kiran G Kulirankal, Vasant P. KABC, Anna Kurian. Adulthood Varicella zoster complicated by spontaneous pneumothorax. International Journal of Contemporary Medical Research 2022;9(12):L1-L2.



adhesions, loculated empyema in left lower zone with serous fluid and thick purulent flakes, pleural peel adherent to left lower lobe with collapse. Post procedure patient had good lung expansion to 90 %. Decortication along with stripping of the thickened pleural peel around the lower and upper lobe was done. Patient improved symptomatically with the above treatment and was discharged.

DISCUSSION

Pneumonia is a serious complication of varicella with its severity increasing with age. Risk factors for developing varicella pneumonia include cigarette smoking, immunosuppression, males, and pregnancy.³ Pneumothorax is a rare complication in adulthood varicella⁴. It is proposed due to superinfection caused by necrotizing bacteria or barotrauma or rupture of sub-pleural necrotic nodules or the rupture of pre-existing blebs due to inflammation caused by pneumonia. Spontaneous pneumothorax is a rare complications of varicella pneumonia and only a handful of cases have been reported. The occurrence of pneumothorax generally proceeds to worsening respiratory shock needing mechanical ventilation if not dealt with promptly. Chest drainage must be performed. Surgical excision of the pleural blebs and pleurodesis could be necessary in some patients. Intravenous antiviral therapy (acyclovir: 10 mg/kg/day) is indicated in such patients.⁴ Spontaneous pneumothorax may occur as an early or as a late feature in varicella pneumonia and treating physicians need to be aware of these potentially fatal complications. Any patient with chicken pox presenting with dyspnoea should be evaluated for a pneumothorax with an immediate chest X ray .

CONCLUSION

Varicella vaccination although not included in the national schedule should be strongly considered in adults because of their risk of morbidity and mortality.

ACKNOWLEDGEMENT

We would like to acknowledge the entire staff of Departments of General medicine, Radiology , Pulmonology , CVTS and medical administration for their co-operation.

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Source of Support: Nil; **Conflict of Interest:** None

Submitted: 25-10-2022; **Accepted:** 29-11-2022; **Published:** 31-12-2022