Case	(632) Multilobar pneumonia secondary to influenza a virus.
Authors	L. Hernández Martínez, I. Navas Fernández-silgado, R. Sanz De Lucas, I. Ríos Gómez, Z.h. Chen Zhou, S. Borruel Nacenta.
Centre	Hospital Universitario 12 Octubre.

CASE PRESENTATION

A 60-year-old woman, asthmatic with good control, comes to the emergency department because of dyspnea and a productive cough that had not progressed for two weeks, despite antibiotic therapy with levofloxacin.

Chest radiograph shows bilateral reticulonodular areas of opacity with focal areas of consolidation, specially in the lower lobes. CT shows multiple irregular areas of consolidation along the bronchovascular bundles and diffuse ground-glass opacity with interlobular septal thickening in both lungs.

The nasopharyngeal aspirate is positive for influenza A virus (A H1N1) so it is finally diagnosed of multilobar pneumonia secondary to influenza A virus. Treatment is started with oseltamivir and augmentine for 5 days, systemic steroids and bronchodilators, with clinical improvement.

DISCUSSION

Imaging features of viral infections of the respiratory tract are diverse and may be affected by pathogens, age, inmune status, seasonal variation in incidence and community outbreak periods. Most viral pneumonia patterns exhibit similarity on the basis of viridae and are related to the pathogenesis of pulmonary viral infection.

Influenza virus belongs to the orthomyxovirus family of RNA viruses and human disease is predominantly caused by types A and B. Type A virus is the most virulent, account for most viral pneumonias in immunocompetent adults and can easily mutate. Seasonal influenza is an acute respiratory illness that occurs particularly during the winter months. Infections are usually mild and restricted to the upper respiratory tract.

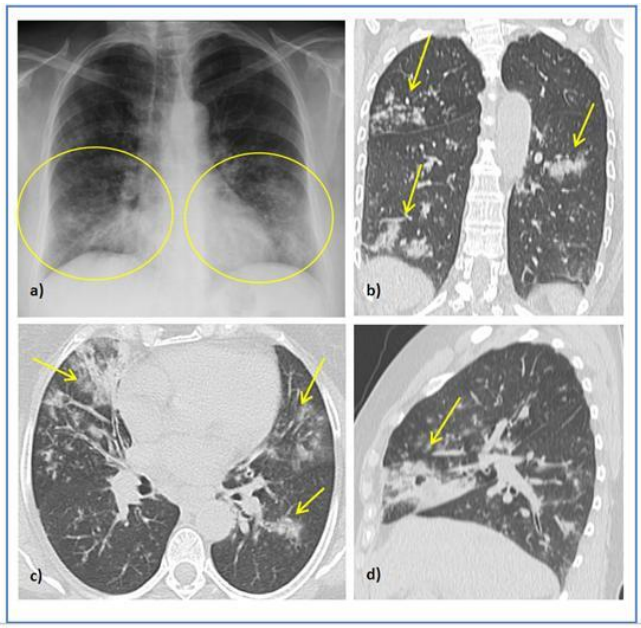
However, in individuals with chronic diseases, the elderly, and infants, severe complications from in?uenza A viruses, including hemorrhagic bronchitis or fulminant pneumonia may occur.

Influenza virus invades the respiratory epithelium, resulting in bronchitis with the airway walls congested and diffuse alveolar damage in later stage, which mainly manifest as diffuse ground-glass opacity and consolidation. Pleural effusion is rare.

Secondary bacterial pneumonia can occur, Streptococcus pneumoniae infection in particular, and must be suspected when there are changes in radiologic abnormality or lobular consolidation.

CONCLUSION

Viruses are common causes of acute respiratory infection. Although a definite diagnosis cannot be made by using imaging features alone, a combination of clinical, radiographic findings and recognition of viral pneumonia patterns may help and can substantially improve the accuracy of diagnosis in this disease and reduce the unnecessary use of antibiotics.



Multilobar pneumonia secondary to influenza A virus in a 60-year-old woman.

a) Chest radiograph shows bilateral reticulonodular areas of opacity with focal areas of consolidation (yellow circles), mainly in the lower lobes.

b), c) and **d)** Coronal, axial and sagittal CT images (lung window) respectively, show multiple irregular areas of consolidation (yellow arrows) along the bronchovascular bundles and diffuse ground-glass opacity with interlobular septal thickening in both lungs.

BIBLIOGRAPHY

- Hyun Jung K., Soyeoun L., Jooae C., Sang-Ho C., Heungsup S., Kyung-Hyun D. Radiographic and CT Features of Viral Pneumonia. Radiographics. 2018; 38(3): 719-39. doi: 10.1148/rg.2018170048

- Franquet T. Imaging of Pulmonary Viral Pneumonia. Radiology. 2011; vol. 260: Number 1.