Explosive pleuritis

in the primary culture (except for the specimen that was inoculated into broth, which required four days for growth) and were not the usual pathogens for empyema secondary to community-acquired pneumonia. Unfortunately, lung tissue was not found in any specimens taken at the time of the thoracotomy, and hence, the histopathology of the peribronchial lymphatics could not be evaluated.

The initiation of antibiotics at an early stage may have been responsible for the inability to isolate the causative bacterial organism from either the blood, sputum or pleural fluid cultures. However, the rapid progression of the radiographic findings, correlated with the sudden clinical deterioration, warranted aggressive administration of broad spectrum antibiotics at an early stage. The source of pleural infection in this case was likely an inhaled inoculum that was not clearly apparent as pneumonia. The computed tomography scans of the thorax suggested the possibility of an obstructive, intraluminal lesion at the level of the division of the main stem bronchus. Fortunately, bronchoscopy clearly demonstrated the absence of any obstructive mass. The definitive therapy included antimicrobial prophylaxis, thoracotomy, decortication of the loculated parapneumonic effusion and chest tube drainage.

The progression of clinical and radiographic findings are characteristic in explosive pleuritis. The time course is rapid and, by our definition, within 24 h, the pleural effusion expands to involve more than 90% of the hemithorax and results in the compression of pulmonary tissue with a mediastinal shift to the contralateral side.

SUMMARY

The present case illustrates several unique features of a rapidly progressive pleural effusion. The authors define explosive pleuritis as the rapid development of pleural effusion involving more than 90% of the hemithorax within 24 h, causing the compression of pulmonary tissue and a mediastinal shift to the contralateral side. Explosive pleuritis is a medical emergency that demands prompt investigation and early treatment. A combination of appropriate broad spectrum antibiotics and individualized conservative surgical intervention can be life-saving.

REFERENCES


Pondering parotid masses

Mark A Miller MD

A 49-year-old, human immunodeficiency virus (HIV)-infected, Haitian-born woman presented with a left facial mass that she had noticed for the previous eight weeks. She was known to have been HIV-seropositive for the previous 11 years and had been on multiple antiretroviral therapies. Her past medical history was also significant for hypertension, disseminated varicella zoster virus and recurrent oral and buttock Herpes simplex episodes. She was taking the following medications at the time of her presentation with the facial mass: stavudine, lamivudine, didanosine, nelfinavir mesylate, famciclovir, hydrochlorothiazide and cotrimoxazole. She had no complaints of fever, chills, sweats, weight loss or anorexia. She denied any pain, redness or warmth at the site of the facial swelling. Her most recent CD4 lymphocyte count was 336 cells/µL, with an HIV viral load of log10 2.6 copies/mL.

Physical examination revealed a 4 cm fluid-filled mass in the left parotid gland. There was no detectable induration, redness, warmth or tenderness, and no associated adenopathy. The rest of the examination was unremarkable. An aspirate of the mass was performed under sterile conditions and yielded 30 mL of turbid, yellow liquid. A Gram stain revealed no neutrophils, scant mononuclear cells and no visible organisms. An acid-fast stain was negative as well. Routine, mycobacterial and fungal cultures showed no growth. Cytological analysis showed scant reactive lymphocytes and no malignant cells.

The patient was not given therapy and was observed for another two months. The fluid reaccumulated in the left parotid gland, and the patient’s only complaint concerned the unsightly appearance of the mass. The lesion was again aspirated for 30 mL of fluid and this time, the fluid had a turbid, brown appearance. All laboratory results were identical to the results from the first aspirate. What is your diagnosis, and how would you treat this patient?

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**CLINICAL VIGNETTE**

**DIAGNOSIS**

This HIV-infected woman was affected with benign lymphoepithelial parotid cysts (BLPCs). This condition is associated with HIV infection in both adults and children (1-3). It may present unilaterally or bilaterally. Although sometimes painful, these cysts are usually not tender and noninflammatory. Most patients only complain about the unpleasant appearance of the mass. Although a parotid mass in any individual may be neoplastic in nature, parotid tumours are very rare in HIV-infected persons.

The exact etiological nature of BLPCs is unknown. However, the current hypothesis is that lymphoid hyperplasia in intraparotid lymph nodes causes partial or complete duct obstruction, leading to fluid-filled cysts (3). The reason that the parotid glands (and not other salivary glands) are involved in BLPCs arises from the fact that only the parotid gland has sequestered lymph nodes inside the gland capsule. These lymph nodes are incorporated inside the parotid gland during embryological development. Other reasons for lymphoid proliferation in the parotid gland may also play a role (ie, HIV [4] or other viral infections).

Antiretroviral therapy usually leads to the regression of BLPCs (1), but the appearance of residual cysts may become a source of distress for the patient. Treatment modalities that have been attempted include repeated needle aspiration, superficial parotidectomy, low dose radiotherapy (5,6) and laser ablation. An interesting new approach is sclerotherapy, completed by aspiration and subsequent injection of doxycycline intralesionally (3,7). Insufficient experience with this latter therapy precludes its routine recommendation at the present time, but it may be the least invasive treatment approach for refractory BLPCs.

In conclusion, diagnostic tests (including cultures of aspirated contents to rule out rare infections [8]) should be performed on all parotid masses in HIV-infected individuals. The most common diagnosis of cystic parotid lesions is BLPCs, which usually respond to antiretroviral therapy. No optimal therapy has yet been determined for refractory cysts, but doxycycline sclerotherapy seems to be a promising approach.

**REFERENCES**


**BOOK REVIEW**

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transmission and presents a detailed summary on the ability of zidovudine to prevent mother-to-offspring transmission of HIV.

The last two chapters in the book deal with the issue of specific proteins. One of these chapters is an analysis of “Determinants of HIV protein evolution” by Kuiken et al. This is an important subject, in view of the fact that HIV diversity promotes evolution of all viral proteins and has multiple consequences with regard to viral tropism. This subject constitutes one of the principal reasons why it has been impossible, to date, to develop a safe and effective HIV vaccine. This chapter deals effectively with the subject of host immune responsiveness to HIV infection, and includes the topic of cytotoxic T lymphocyte epitopes and variability in this regard. Also considered is the subject of nucleotide variability with regard to protein evolution. Finally, the last chapter deals with the importance of HIV drug resistance, a topic that is germane to the practice of HIV treatment clinicians. Unfortunately, this is one of the weaker chapters in the book and does not deal extensively with important issues such as cross-resistance among various types of antiviral drugs that may belong to different families of compounds. Also omitted is the important subject of primary versus secondary mutations with regard to their importance in conferring significant levels of resistance. This chapter also does not make mention of the newly emerging and important subject of HIV resistance in primary infection. Nonetheless, the chapter is easy to follow and can serve as a basis for the individual who wishes to acquire further knowledge on this subject.

In summary, this is an important volume that is of obvious interest to HIV specialists. Aspects of the volume are clearly of interest to HIV treatment specialists and almost anyone who wishes to gain further detailed knowledge and appreciation of HIV disease, including the reasons why this virus poses such a terrible threat to worldwide public health. In general, the quality of this book compares well with that of other books on the subject of HIV. The specialized nature of this volume may prove to be its greatest strength in the field of HIV evolution, although some readers will definitely find that some chapters offer more detailed information than they are able to easily follow.