



Eosinophilic Pleural Effusion: A Brief Review of Case Reports in Literature

Eozinofilik Plevral Efüzyon: Literatürdeki Olgu Sunumlarının Kısa Bir Değerlendirmesi

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Abstract

Eosinophilic pleural effusion is defined by an eosinophil count of more than 10 percent in the pleural fluid. Pleural irritation, trauma, and malignancy are common causes of eosinophilic pleural effusion. Drug reaction, infection, inflammation, pulmonary embolism, toxin, cirrhosis, and heart failure should be considered in the differential diagnosis. In this report the National Library of Medicine's Medline database was searched for case reports diagnosed with eosinophilic pleural effusion.

Key words: Pleura, eosinophil, effusion.

Özet

Plevra sıvısında eozinofil sayısının yüzde 10'dan yüksek olması eozinofilik plevral efüzyon olarak tanımlanır. Plevral hasar, travma ve malignite eozinofilik plevral efüzyonun sık nedenlerindendir. İlaç reaksiyonu, infeksiyon, inflamasyon, pulmoner embolizm, toksin, siroz ve kalp yetmezliği ayırıcı tanıda düşünülmelidir. Bu raporda National Library of Medicine's Medline veritabanı araştırılmış ve eozinofilik plevral efüzyon tanısı alan olgu sunuları değerlendirilmiştir.

Anahtar Sözcükler: Plevra, eozinofil, efüzyon.

Eosinophilic pleural effusion (EPE) is defined as a pleural effusion with a nucleated cell count containing more than 10% eosinophil and accounts for approximately 10% of exudative type of pleural effusions (1).

Pleural irritation, trauma, and malignancy are common causes of EPE. Drug reaction, infection, inflammation, pulmonary embolism, toxin, cirrhosis, and heart failure should be considered in the differential diagnosis (2,3).

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EPE may be idiopathic. These patients should be monitored until the effusion resolves or a known cause becomes apparent.

In this study, the National Library of Medicine's Medline database was searched for case reports published in the English language until May 2013. The keywords "eosinophilic pleural effusion", "eosinophilic pleural fluid", and "eosinophilic pleurisy" were searched.

The electronic database searches identified 207 citations. A total of 137 papers that were not case reports related to EPE were excluded on the review of the title and abstract. The remaining 70 papers reporting 71 cases were evaluated (4-73). The cause of EPE was drug reaction or drug abuse in 24 (33.8%) cases, infection in 21 (29.6%) cases, inflammatory disease in 15 (21.1%) cases, tumor or malignancy in 9 (12.7%) cases, and postoperative or complication in 2 (2.8%) cases (Table 1).

Of 57 cases with detailed information of side and size of pleural fluid, 39 cases (68%) were male and 18 cases (32%) were female with a mean age of 47.6 ± 7.8 years (age range: 14-82 years). Twenty cases (35%) had moderate, 19 cases (33%) had massive, and 18 cases (32%) had mild pleural fluid. Pleural fluid was right sided in 22 cases (38%), while it was left sided in 21 cases (37%) and bilateral in 14 cases (25%).

Cytologic and microbiologic examination of pleural effusion, drug history, radiologic and clinical evaluation with a detailed blood analysis should be done to differentiate patients with EPE. In conclusion, case reports of EPE originating from trauma, hemorrhage to the pleural space, pneumothorax, and malignancy were reported less than they are observed in real life, although all these causes are mentioned as major causes of EPE in most of introduction sections of published materials.

Table 1: Characteristics of cases with eosinophilic pleural effusion.

Cause	Name	Cases (n)
Drug reaction or drug abuse	Valproic acid	4
	Dantrolene	3
	Mesalazine	2
	Propylthiouracil	2
	Diltiazem	1
	Divalproex sodium	1
	Fluoxetine hydrochloride	1
	Gliclazide	1
	Granulocyte macrophage colony stimulating factor	1
	Isoniazid	1
	Imidapril	1
	Isotretinoin	1
	Tizanidine	1
	Vitamin B5 and H	1
	Warfarin	1
	Crack cocaine	1
	Heroin	1
Infection	Parasitic	
	Microfilariae	3
	Paragonimiasis	3
	Strongyloidosis	3
	Anisakiasis	1
	Cutaneous myiasis	1
	Dracunculiasis	1
	Hydatid cyst	1
	Sparganosis	1
	Toxocariasis	1

Table 1: Characteristics of cases with eosinophilic pleural effusion (continuing).

Cause	Name	Cases (n)
	Bacterial	
	Mycoplasma pneumonia	1
	Pneumococcal empyema	1
	Q fever pneumonia	1
	Fungal	
	Aspergillosis	1
	Coccidioidomycosis	1
	Viral	
	Hepatitis A	1
Inflammatory disease	Churg-Strauss syndrome	4
	Idiopathic hypereosinophilic syndrome	2
	Sarcoidosis	2
	Acute eosinophilic pneumonia	1
	Chronic eosinophilic pneumonia	2
	Eosinophilic fasciitis	1
	Organized pneumonia	1
	Progressive systemic sclerosis and polymyositis	1
	Systemic lupus erythematosus	1
Tumor or malignancy	Lymphoma	5
	Multiple myeloma	3
	Eosinophilic granuloma of the rib	1
Postoperative or complication	Congenital heart surgery	1
	Gastric variceal obliteration with cyanoacrylate	1

CONFLICTS OF INTEREST

None declared.

AUTHOR CONTRIBUTIONS

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