



Co-existence of Lymph Node Tuberculosis and Pulmonary Embolism: A Case Report

Lenf bezi Tüberkülozu ve Pulmoner Emboli Birlikteliği: Olgu sunumu

Lenf bezi Tüberkülozu ve Pulmoner Emboli Birlikteliği / Lymph Node Tuberculosis and Pulmonary Embolism

İbrahim Koç¹, Serdar Doğan², Yusuf Doğan³, Ahmet Ulusan⁴

¹Pulmonary Medicine, Viransehir State Hospital, Sanliurfa, ²Biochemistry, Viransehir State Hospital, Sanliurfa,

³Microbiology, Viransehir State Hospital, Sanliurfa, ⁴Thoracic Surgery, Hitit University Corum Education and Research Hospital, Corum, Turkey

Özet

Pulmoner emboli vücudun başka bir yerinden kaynaklanan bir oluşumla ile pulmoner arterlerin tıkanması ve erken teşhis ve tedavi edilmediği takdirde yüksek ölüm oranına sahip bir hastalıktır. Tüberküloz Mycobacterium tuberculosis'in neden olduğu genellikle akciğerleri etkileyen bir hastalık olup vücudun diğer organları da etkilenebilmektedir. Burada nefes darlığı, kilo kaybı ve gece terlemeleri, nefes darlığı şikayetleri ile kliniğimize başvuran altmış üç yaşında bir kadın hasta sunulmaktadır. İleri yaşta kilo kaybı ve gece terlemesi, bir maligniteyi düşündürmüş olmakla beraber tümör belirteçleri negatif saptandı. Sigara içmeyen daha önceden sağlıklı olan bir bireyde düşük oksijen saturasyonu pulmoner emboliden şüphelendirmiştir. Akciğerin bilgisayarlı tomografi anjiyografisinde lenfadenopati ve pulmoner emboli saptandı. Servikal lenf nodu eksizeyonunun patolojik değerlendirilmesinde kazeifikasyon nekrozu saptandı. Sonuç olarak pulmoner emboli tanılı olan hastalarda kilo kaybı ve oksijen saturasyonunda düşme varsa maligniteyle beraber tüberkülozun da ekarte edilmesi gerekmektedir.

Anahtar Kelimeler

Pulmoner Emboli; Lenf Bezi; Tüberküloz

Abstract

Pulmonary embolism is occlusion of pulmonary arteries with a material originating from another part of the body and has a high fatality rate if not diagnosed and managed early. Tuberculosis is an infection caused by mycobacterium tuberculosis, generally affecting lungs but involvement of other parts of the body is possible. Here we report a sixty three years old woman who admitted to our clinic with complaints of shortness of breath, weight loss and night sweats. Weight loss and night sweats in old age were suggestive of a malignancy but tumor markers were negative. Low oxygen saturation in a non-smoking previously healthy person arise suspicion of pulmonary embolism. Computed tomography pulmonary angiography revealed lymphadenopathy and pulmonary embolism. Pathology of the servical lymph node revealed caseation necrosis. In conclusion in patients with pulmonary embolism who has weight loss and low oxygen saturation beside the malignancy tuberculosis also should be excluded.

Keywords

Pulmonary Embolism; Lymph Node; Tuberculosis

DOI: 10.4328/JCAM.3758

Received: 14.07.2015 Accepted: 31.07.2015 Printed: 01.10.2015 J Clin Anal Med 2015;6(suppl 5): 650-2

Corresponding Author: İbrahim Koc, Pulmonary Medicine, Viransehir State Hospital, Sanliurfa, Turkey.

GSM: +905453142502 E-Mail: İbrahimkoc1981@gmail.com

Introduction

Pulmonary embolism (PE) is occlusion of pulmonary arteries with a material originating from another part of the body and has a high fatality rate if not diagnosed and managed early. The causes of pulmonary embolism can be venous thromboembolism (VTE), and nonthrombotic embolism like septic, fat, air, amniotic fluid and tumour embolism. Patients might present with different variable clinical presentation and often have non-specific complaints which make the diagnosis challenging. The reported annual incidence of VTE differs ranging between 23 and 69 cases per 100,000 population, [1, 2] with approximately one third of patients presenting with acute PE and two thirds with deep vein thrombosis [3]. Tuberculosis is a major health problem in undeveloped and developing countries like Turkey with a various presentations and complications. Tuberculosis can lead to hypercoagulability, increased venous stasis, and endothelial dysfunction, thus increasing the susceptibility to (VTE) and pulmonary thrombo embolism (PTE). Here we report a sixty three years old woman who had lymph node tuberculosis and PE.

Case Report

A sixty three years old woman admitted to our clinic with complaints of shortness of breath, weight loss and night sweats. Her medical and family histories were unremarkable. Her physical examination revealed normal body temperature (36oC), heart rate of 100 beats per minute, respiratory rate of 20 breaths per minute, blood pressure of 110/80 mm Hg, and SpO₂ of 85% on room air. Physical examination revealed servical lymphadenopathy (Picture 1). Physical examination of the chest revealed



Picture 1. Enlarged servical lymph nodes of the patient.

normal vesicular sounds. Weight loss and night sweats in old age were suggestive of a malignancy but tumor markers were negative. Low oxygen saturation in a non-smoking previously healthy person arise suspicion of pulmonary embolism. Computed tomography pulmonary angiography revealed lymphadenopathy and pulmonary embolism (Figure 1). Servical lymph node excision revealed caseation necrosis (Picture 2).

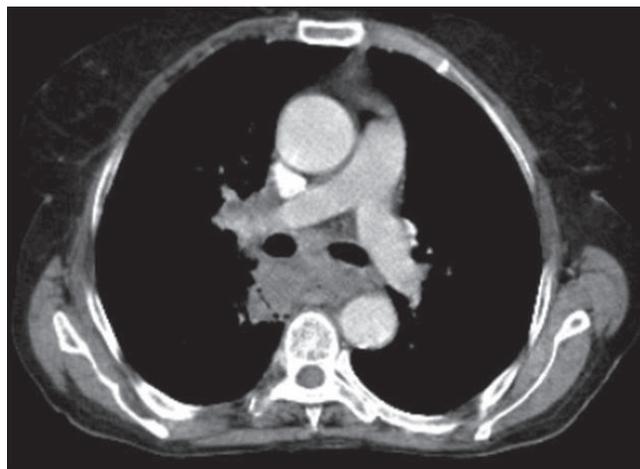
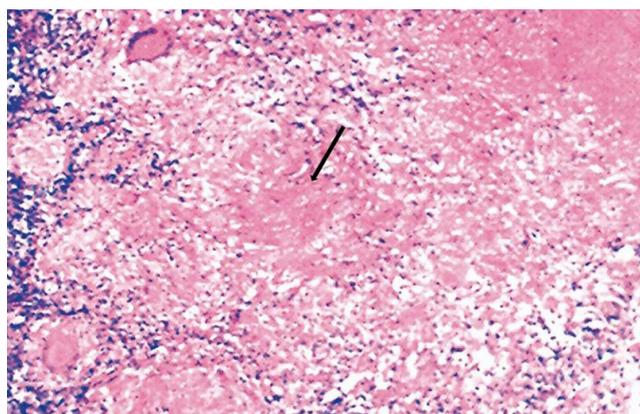


Figure 1. Mediastinal lymphadenopathy and pulmonary embolism.



Picture 2. Caseation necrosis of the lymph node specimen (Black arrow) (HE×200).

Discussion

Tuberculosis is a major health and public problem in undeveloped and developing countries. PTE is the third greatest cause of mortality from cardiovascular disease, after myocardial infarction and cerebrovascular stroke [4]. The real number is likely to be much more than expected, since the condition goes unrecognised in many patients. In a study Ozbay et al. reported a higher rate of pleural and meningeal involvement among extrapulmonary tuberculosis cases than expected [5]. Drawing attention to tuberculous meningitis because of its high mortality rate. Tuberculosis mostly effects the lungs but may have more serious outcomes like meningitis and pulmonary embolism. This case highlights the occurrence of lymph node tuberculosis and pulmonary embolism in a patient with lymph node tuberculosis with no risk factors for thromboembolism, a significant but rare association posing a diagnostic dilemma which may have serious prognostic implications.

It has been shown that recent respiratory infection, acute infection and raised inflammatory markers, are associated with

increased risk of thromboembolic disease [6]. It has been reported that prevalence of PTE in patients with pneumonia as high as 10% [7]. Another study has proven that there are strong associations between recent respiratory infection and venous thromboembolism which may be related to the severity of the infection [6]. There are obvious evidences about the hypercoagulability state in tuberculosis [8]. Co-existence of lymph node tuberculosis and pulmonary embolism is a rare entity. Increase in plasma fibrinogen and factor VIII, and reactive thrombocytosis might be reasons of hypercoagulability in tuberculosis patients. In our case, in addition to above mentioned factors stasis due to local compression of veins by the enlarged reactive lymph nodes or immobility caused by respiratory compromise, and or endothelial dysfunction might be reasons leading to pulmonary embolism.

In conclusion in patients with pulmonary embolism who has weight loss and low oxygen saturation beside the malignancy tuberculosis also should be excluded. Although the differential diagnosis is difficult in tuberculosis because of the non-specific clinical and radiological findings, still is easier than of pulmonary embolism which requires specific diagnostic tools. Clinicians must be careful, acute onset of symptoms like shortness of breath, pleuritic chest pain, and hypoxemia must arise suspicious.

Competing interests

The authors declare that they have no competing interests.

References

1. Silverstein MD, Heit JA, Mohr DN, Petterson TM, O'Fallon WM, Melton LJ, 3rd. Trends in the incidence of deep vein thrombosis and pulmonary embolism: a 25-year population-based study. *Arch Intern Med* 1998;158(6):585-93.
2. Anderson FA, Jr., Wheeler HB, Goldberg RJ, Hosmer DW, Patwardhan NA, Jovanovic B, et al. A population-based perspective of the hospital incidence and case-fatality rates of deep vein thrombosis and pulmonary embolism. The Worcester DVT Study. *Arch Intern Med* 1991;151(5):933-8.
3. White RH. The epidemiology of venous thromboembolism. *Circulation* 2003;107(23 Suppl 1):14-8.
4. Goldhaber SZ, Visani L, De Rosa M. Acute pulmonary embolism: clinical outcomes in the International Cooperative Pulmonary Embolism Registry (ICOPER). *Lancet* 1999;353(9162):1386-9.
5. Ozbay B, Uzun K. Extrapulmonary tuberculosis in high prevalence of tuberculosis and low prevalence of HIV. *Clin Chest Med* 2002;23(2):351-4.
6. Clayton TC, Gaskin M, Meade TW. Recent respiratory infection and risk of venous thromboembolism: case-control study through a general practice database. *Int J Epidemiol* 2011;40(3):819-27.
7. Rohacek M, Szucs-Farkas Z, Pfortmuller CA, Zimmermann H, Exadaktylos A. Acute cardiac disorder or pneumonia and concomitant presence of pulmonary embolism. *PLoS One* 2012;7(10):e47418. PubMed PMID: 23091623. Epub 2012/10/24. eng.
8. Sharif-Kashani B, Bikdeli B, Moradi A, Tabarsi P, Chitsaz E, Shemirani S, et al. Coexisting venous thromboembolism in patients with tuberculosis. *Thromb Res* 2010;125(5):478-80.

How to cite this article:

Koç İ, Doğan S, Doğan Y, Uluşan A. Co-existence of Lymph Node Tuberculosis and Pulmonary Embolism: A Case Report. *J Clin Anal Med* 2015;6(suppl 5): 650-2.