

Coincidental Lung Mass Diagnosis in COVID-19 Infected Patient: A Case Report

Korona Virus Enfekte Olguda Rastlantısal Akciğer Kitle Tanısı: Bir Olgu Sunumu

 Turkan İkizceli¹,  Serhat Aras²,  Rustu Turkey¹,  Nurdan Gocgun¹,  Bahar Atasoy Badur¹,
 Sevim Ozdemir¹

1-Sağlık Bilimleri Üniversitesi, Haseki Sağlık Uygulama ve Araştırma Merkezi, Radyoloji Anabilim Dalı, İstanbul. 2-Sağlık Bilimleri Üniversitesi, Meslek Yüksek Okulu, Görüntüleme Teknikleri, İstanbul

ABSTRACT

Introduction: COVID-19 (Corona Virus Disease-19) is a newly discovered virus that caused pandemic infection worldwide. The imaging methods are crucial for diagnosis and follow-up in this infectious period. In this article, a case with coronavirus, which was diagnosed as lung cancer incidentally, is presented.

Case report: A 41-year-old man presented to the emergency room with cough, fever, and shortness of breath. On examination, breathing sounds changed by listening in the lung. Lung computerized tomography was performed due to shortness of breath while waiting for the PCR test. In addition to the findings of atypical viral pneumonia compatible with coronavirus infection in the tomography, there was a 44x64mm mass in the right lung middle lobe. Coronavirus treatment was initiated in the patient, whose PCR test was positive. The patient who responded to the treatment after one week was diagnosed as lung cancer as a result of the biopsy.

Conclusion: In the diagnosis of COVID-19, imaging has a crucial role. Incidental findings are commonly detected by computed tomography.

ÖZET

Giriş: Korona virus tüm dünyada pandemiye neden olan yeni keşfedilmiş bir virustur. Görüntüleme yönteminin tanı ve takite oldukça önemli olduğu görülmüştür. Bu yazıda 41 yaşında korona enfeksiyonu esnasında çekilen bilgisayarlı toraks tomografisi ile insidental olarak akciğer kanseri tanısı alan bir olgu sunulmuştur.

Olgu Sunumu: 41 yaşında erkek hasta öksürük, ateş ve nefes darlığı ile acil servise başvurdu. Muayenesinde akciğerde dinlemekle solunum sesleri değişmişti. PCR testi yapılan olguda nefes darlığı olması nedeniyle Akciğer bilgisayarlı tomografi çekildi. Tomografide korona virus enfeksiyonu ile uyumlu atipik viral pnemoni bulgularının yanında sağ akciğer orta lobda 44x64 mm kitle mevcuttu. PCR testi pozitif gelen olgunun korona virus tedavisi başlandı. 1 hafta sonra tedaviye cevap veren olguda biyopsi sonucu akciğer kanseri tanısı konuldu.

Sonuç: Korona virus enfeksiyon tanısında görüntüleme oldukça önem arz etmektedir. İnsidental bulgular sıklıkla Bilgisayarlı Tomografi tarafından tespit edilmiştir.

Key Words:

Coronavirus,
Incidental mass,
Lung cancer,
Computed tomography,
COVID-19

Anahtar Kelimeler:

Koronavirüs,
Rastlantısal kitle,
Akciğer kanseri,
Bilgisayarlı tomografi,
KOVID-19

INTRODUCTION

COVID-19 (Corona Virus Disease-19) is a newly discovered virus that caused pandemic infection worldwide. COVID-19 virus is a contagious infection that causes mild to moderate respiratory disease and recover without special treatment. Older people and those with underlying medical problems such as cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illnesses (1). Imaging is very crucial to diagnose and follow-up. However, computed tomography (CT) is not recommended for COVID-19 screening and diagnosis. Meanwhile, it plays an essential role in treating patients with new diseases and ruling out alternative diagnoses or co-existing disorders (2).

We present a case of COVID-19 infected patient that incidentally diagnosed lung cancer detected by CT scan.

CASE

A 41-year-old man presented to the emergency room with cough, fever, and shortness of breath. The patient had a family history of patient contact with corona. On examination, breathing sounds changed by listening in the lung. His vital signs were: blood pressure 120/70 mm Hg, heart rate 92 beats per minute, respiratory rate 18 breaths per minute, and temperature 38.1°C. Laboratory findings; WBC = 14.32 10³/mm³, HGB = 13.4 g/dL, NEU = 11.2 uL, NEU% = 78.2, CRP = 236.6 mg/L. First of all, the RT-PCR test performed, but he had a symptom of dyspnea. We decided to perform a non-contrast thorax CT scan due to shortness of breath while waiting for the PCR test. CT findings showed that bilateral peripheral ground-glass opacities and subsegmental consolidation. Also, the results of atypical viral pneumonia compatible with coronavirus infection (figure 1a, b); there was a 44x64 mm mass in the right lung middle lobe (figure 2a, b). The mass was up to the heart's right atrium and adjacent to the vascular

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Correspondence: Turkan İkizceli University of Health Sciences Haseki Training and Research Hospital; Adnan Adivar Street, Number:9, 34130, Fatih, Istanbul/TURKEY Email address: turkan.ikizceli@sbu.edu.tr Phone number: +90 532 455-6302

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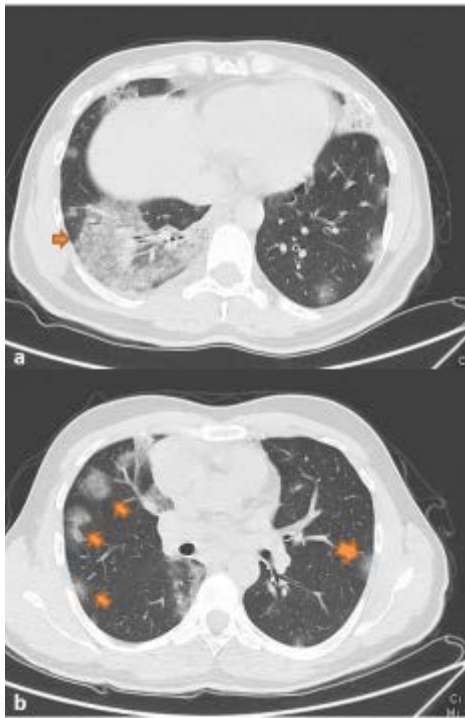


Figure 1: a) Axial CT scan shows that subsegmental consolidation (arrow)
b) bilateral, multiple, rounded ground-glass opacities (arrows)

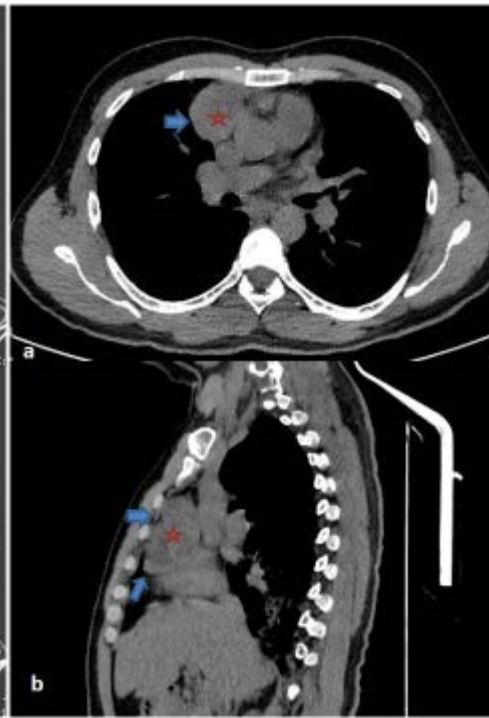


Figure 2: a) Axial ve b) sagittal CT images of the patient. The mass (star) adjacent to the vascular area.

structures in the mediastinal structures. Coronavirus treatment was initiated in the patient, whose PCR test was positive. The patient who responded to the treatment after one week was diagnosed as lung cancer as a result of the biopsy. Informed consent was obtained from the patient for the publication of this manuscript.

DISCUSSION

COVID-19 (Corona Virus Disease-19) is a zoonotic illness first reported in the city of Wuhan, China, in December 2019, and is now officially a global pandemic as declared by the World Health Organization. The infection is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). COVID-19 infected patients can be asymptomatic carriers or present with mild-to-severe respiratory symptoms (3). The most common symptoms are fever, cough, and tiredness. Less common symptoms; sore throat, muscle pain, diarrhea, conjunctivitis, headache, the new loss of taste or sense of smell, rash on the skin. Serious symptoms: trouble breathing or shortness of breath, chest pain, or pressure in the chest, loss of speech, new confusion, or inability to stay awake. The presence of one of these is a sign that emergency medical care is needed (4). Older adults and people who have severe underlying medical conditions like heart or lung disease or diabetes seem to be at higher risk for developing more serious complications from COVID-19 illness (3, 4).

Two kinds of tests are available for COVID-19 to diagnose: viral tests (RT-PCR) and antibody tests (IgM

and IgG). SARS-CoV-2 RNA is identified by RT-PCR (5). No matter the type of test, if anyone has a positive test, you should take preventive measures to protect yourself and others. Most people get a mild illness and can recover without medical care at home and need not be tested (5). Additional laboratory tests, including CBC, are generally nonspecific. The leukocyte count is frequently normal or low, might be lymphopenia; a lymphocyte count <1.000 has been related to severe disease. The thrombocyte count is generally normal or slightly depressed. The ALT/AST, prothrombin time, creatinine, D-dimer, CPK, LDH, myohemoglobin, and ferritin levels might be increased, and elevated levels might be related to severe disease (6). High D-dimer levels and more severe lymphopenia have been shown to be linked with fatality (7). In our case, laboratory findings were similar.

Imaging in COVID-19 The lung X-ray (CXR) generally shows bilateral infiltrations but may be normal in the early phase of the disease. The chest CT is more sensitive and specific. CT findings of COVID-19 have been widely reported. Lung CT scans generally demonstrate infiltrates, ground-glass opacities, and subsegmental consolidation. Less common abnormalities contain pleural effusion/thickening, and lymphadenopathy. During the early phase of COVID-19 disease, thorax CT shows multiple small plaques and interstitial alterations, evident in the lung periphery, further worsens to bilateral multiple ground-glass

opacity and/or infiltrating shadows. Pulmonary consolidation may happen in severe cases. Pleural effusion is infrequently observed (1, 8). In our case, there were a large number of peripheral rounded multiple ground ground-glass densities on CT. A younger patient, such as a 41-year-old for lung cancer, had a biopsy-verified lung mass in the middle lobe of the right lung. Pathologic lung CT imaging has also been utilized to identify COVID-19 is suspected and/or asymptomatic cases with negative RT-PCR; many of

them become to have positive PCR when they are repeated (9-11).

CONCLUSION

CT gives essential information during the COVID-19 pandemic, primarily to diagnose some patients with underlying disease. A negative RT-PCR test does not exclude the diagnosis, and an unenhanced CT should be performed. Incidental findings are commonly detected by computed tomography.

Conflicts of Interest

All other co-authors have no conflicts of interest.

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