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Flank Pain as a Symptom of COVID-19



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The COVID-19 disease is spreading rapidly worldwide, and no vaccine or very effective drug has been found yet. However, the transmission rate of the disease can be reduced by taking precautions. Therefore, it is essential to detect the patients early to prevent the spread of the disease.^{1,2} We report a case of 26-year-old male patient who was admitted to our urology outpatient clinic with the complaint of flank pain and had incidental findings of COVID-19 in the lung bases on abdominal CT. UROLOGY 148: e13–e14, 2021. © 2020 Elsevier Inc.

A 26-year-old male patient presented to the urology outpatient clinic with right flank pain. There was no abnormality in the patient's vital signs. Physical examination was unremarkable. Urologic history was notable for ureteral stone managed with ureteroscopy 2 years prior. The patient did not have any comorbidity. In laboratory tests, creatinine was 0.8 mg/dL. In the urine analysis density 1025, pH 6.0, and 1+ erythrocytes were observed. There was no pathology in renal ultrasound. Because of the history of stone surgery and the presence of erythrocytes in the urine analysis, noncontrast abdominal

CT was performed. No urological pathology detected in abdominal CT (Figs. 1, 2).

WHAT WOULD YOU DO NEXT?

- A. Symptomatic treatment only
- B. Refer to physical therapy for flank pain related to muscle spasm
- C. The patient should be hospitalized and followed up in the hospital until his complaints are resolved.

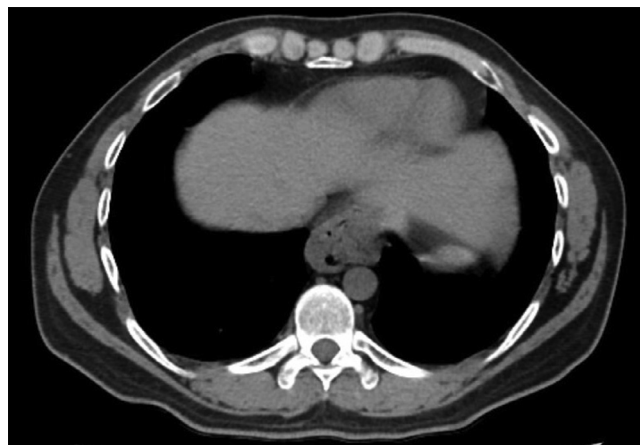


Figure 1. Noncontrast abdominal CT images evaluated in the abdominal window (axial image).

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- D. Abdominal CT images of the patient should be re-evaluated in the lung parenchyma window.

WHAT TO DO NEXT?

D - The abdominal CT images of the patient were re-evaluated in the lung parenchyma window and referred to the pandemic outpatient clinic with suspected COVID-19.

When the abdominal CT of the patient was re-evaluated using lung parenchyma window, with COVID-19,



Figure 2. Noncontrast abdominal CT images evaluated in the abdominal window (coronal image).

more pronounced peripheral areas and diffuse patchy ground glass densities in both lung lower lobes were observed, concerning for a diagnosis of COVID19 (Fig. 3). The patient did not have any symptoms associated with COVID-19 such as fever, cough and shortness of breath at the time of admission. Polymerase chain reaction (PCR) test was positive. Abdominal and back pain have long been described as a symptom in pneumonia in both adults and children secondary to pleural irritation.^{3,4} Irritation-related flank pain caused by inflammation in the lung basal may be the first symptom of COVID-19 disease in some patients.

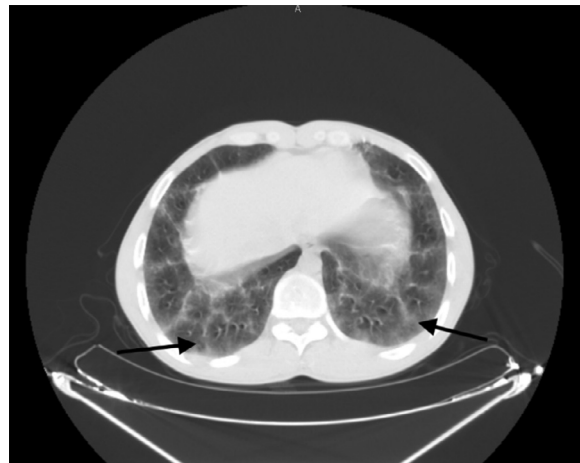


Figure 3. Noncontrast abdominal CT image evaluated in the lung window.

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References

1. Chan JFW, Yuan S, Kok KH, et al. A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster. *Lancet*. 2020;395:514–523. [https://doi.org/10.1016/S0140-6736\(20\)30154-9](https://doi.org/10.1016/S0140-6736(20)30154-9).
2. Phan LT, Nguyen T V, Luong QC, et al. Importation and human-to-human transmission of a novel coronavirus in Vietnam. *N Engl J Med*. 2020;382:872–874. <https://doi.org/10.1056/NEJMc2001272>.
3. Gauss H. Abdominal pain in pneumonia. *Am J Dig Dis*. 1946;13:73–77. <https://doi.org/10.1007/BF03002754>.
4. Grief SN, Loza JK. Guidelines for the evaluation and treatment of pneumonia. *Prim Care*. 2018;45:485–503. <https://doi.org/10.1016/j.pop.2018.04.001>.