Radiology

Letter to the Editor

Radiology Department Preparedness for COVID-19: Facing an Unexpected Outbreak of the Disease

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Editor:

We read with great interest the article, "Radiology Department Preparedness for COVID-19: *Radiology* Scientific Expert Panel" by Dr Mossa-Basha and colleagues published online on March 16, 2020 (1). The authors summarized policies and procedures that radiology departments can apply to protect hospital workers and to treat patients during the emerging COVID-19 pandemic. We would like to communicate our hospital experience in the northern part of Italy, located in the center of Milan.

A rapid and unexpected surge of patients with COVID-19 is posing a serious threat to the Italian National Health Service (2). The prevalence of COVID-19 in the northern Italian population surged at the end of February 2020 and exploded in the past few days, resulting in overcrowding of emergency waiting rooms (3). In response, radiology departments, including our own, rushed to put in place strong operating procedures to support patients with COVID-19, while maintaining standard radiologic support for other patients and reduce contagion.

First, in our hospital, we isolated patients with COVID-19 from other patients. We now perform any radiologic investigation (chest radiography, CT, and US) of positive or suspected patients with COVID-19 in a dedicated radiology unit on the first floor of the emergency department. This unit is accessible from assigned elevators and paths from the emergency department and the intensive and subintensive COVID-19 care units. Moreover,

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a portable x-ray device is inside the intensive care unit to reduce unnecessary handling of equipment.

Second, the swab testing for COVID-19 does not provide information about disease severity and takes at least a few hours for test results. It may also have an initial falsenegative result (4, 5). Thus, we screen all patients presenting with respiratory symptoms or fever with chest radiography. When these radiography findings are inconclusive or a possible false-negative result, the patient undergoes chest CT. In cases of negative imaging results and clinical stability, we discharge patients without waiting for the results of the swab test and advise guarantine.

The safe and immediate use of these imaging examinations upon arrival in our emergency department has shown success in speeding up the management of our patients. We recommend other hospitals with similar situations evaluate such measures during this pandemic.

References

 Mossa-Basha M, Meltzer CC, Kim DC, Tuite MJ, Kolli KP, Tan BS. Radiology Department Preparedness for COVID-19: *Radiology* Scientific Expert Panel. Radiology. 2020 Mar 16:200988. doi: 10.1148/radiol.2020200988. Epub ahead of print. PMID: 32175814. Accessed Mar 25, 2020.

 Spina S, Marrazzo F, Migliari M, Stucchi R, Sforza A, Fumagalli R. The response of Milan's Emergency Medical System to the COVID-19 outbreak in Italy. Lancet. 2020 Mar 14;395(10227):e49-e50. doi: 10.1016/S0140-6736(20)30493-1. Epub 2020 Feb 28. PMID: 32119824. Accessed Mar 25, 2020.

 Lazzerini M, Putoto G. COVID-19 in Italy: momentous decisions and many uncertainties.
Lancet Glob Health. 2020 Mar 18:S2214-109X(20)30110-8. doi: 10.1016/S2214-109X(20)30110-8. Epub ahead of print. PMID: 32199072. Accessed Mar 25, 2020.
Fang Y, Zhang H, Xie J, Lin M, Ying L, Pang P, Ji W. Sensitivity of Chest CT for COVID-19: Comparison to RT-PCR. Radiology 2020:200432. doi:10.1148/radiol.2020200432. Xie X, Zhong Z, Zhao W, Zheng C, Wang F, Liu J. Chest CT for typical 2019-nCoV pneumonia: relationship to negative RT-PCR testing. Radiology 2020:200343. doi: 10.1148/radiol.2020200343. Accessed Mar 25, 2020.