Case Series
Volume 10:5, 2020
DOI: 10.37421/2161-105X.2020.10.508

Journal of
Pulmonary & Respiratory Medicine

ISSN: 2161-105X

Open Access

Are We Getting Tunnel Vision for Non-COVID Patients Amidst the COVID-19 Pandemic?

Waqar Haider Gaba[1]*, Fatma Mahmoud[1], Shahad Hag[1], Asad Shah[2], Syed Athar[1] and Tarek Fiad[3]

[1]Department of Internal Medicine, Shiekh Khalifa Medical City, Abu Dhabi, United Arab Emirates
[2]Department of Radiology, Shiekh Khalifa Medical City, Abu Dhabi, United Arab Emirates
[3]Department of Endocrinology, Shiekh Khalifa Medical City, Abu Dhabi, United Arab Emirates

Abstract

Introduction: Coronavirus Disease (COVID-19) is caused by a novel virus known as SARS-CoV-2. The COVID-19 pandemic started in December 2019 in the city of Wuhan, China and has now spread across the world affecting more than 11 million confirmed cases as of July 2020. COVID-19 had a devastating impact on the economy, capacity as well as the efficiency of the health-care sector internationally. Our hospital has been designated as the tertiary care hospital to cater to all suspected or confirmed COVID-19 patients since March 2020.

Case presentation: We report three cases presenting to our hospital during the first few weeks of this transition with serious diagnoses and symptoms not consistent with COVID-19 infection.

Discussion: All patients required specialist clinical input and cross-sectional imaging with imminent surgical intervention in two cases. The diagnostic work-up and management were unfortunately delayed due to the requirement of ruling out COVID-19 infection.

Conclusion: Delayed management of patients with serious illnesses can lead to increased morbidity and even mortality with associated medicolegal consequences for the healthcare providers. Devising clinical and diagnostic pathways is essential in preventing avoidable delays and thereby mitigating the potential healthcare risks, particularly during any unfamiliar pandemic like COVID-19 in the future.

Keywords: COVID-19 • SARS-CoV-2 • COVID-PCR • COVID rule-out

Introduction

The SARS-CoV 2 causing COVID-19 disease has reached pandemic levels since March 2020 [1]. It is usually a mild self-limiting condition but some would require oxygen therapy for COVID pneumonia or admission to an intensive care unit (ICU) [2,3]. This has led to unprecedented pressures on the healthcare facilities necessitating rapid re-deployment of staff and capacity building towards the management of COVID-19 cases at the occasional expense of non-COVID clinical services, particularly diagnostic services, oncology as well as elective specialist surgery [4].

In March 2020 our hospital became a designated COVID-19 facility. Major reconfiguration of elective as well as selected emergency services was undertaken with shifting to other Non-COVID hospitals. Furthermore, due to ever-increasing demand, multiple COVID clinical teams were required and structured inclusive of all the available medical staff. All patients presenting to our hospital were taken to be COVID-19 positive unless excluded by COVID-PCR.

We describe three cases where COVID-19 rule out had a direct impact on the care and clinical management during the initial phase of this transition.

***Address for Correspondence:** Gaba WH, Department of Internal Medicine, Shiekh Khalifa Medical City, Abu Dhabi, United Arab Emirates, Tel: + 971509713729; E-mail: drgaba@hotmail.co.uk*

Received 19 August, 2020; **Accepted** 31 August, 2020; **Published** 07 September, 2020

Case Description

Case 1

A 58-year-old gentleman presented with a recent fall and unsteadiness with a past medical history of hypertension and ischemic stroke. His GCS was 15, pulse 110/min, BP 161/78, respiratory rate 26/min, saturation 96% on room air and temperature 38°C. His clinical and neurological examinations were normal except gait could not be assessed due to pain. Significant labs included WCC 14×10^{-9}/L, CRP 162 mg/L and creatinine 110 µmol/L. The chest was clear but a COVID infection was suspected and COVID-PCR was sent.

A contrast-enhanced CT showed numerous lytic-sclerotic lesions in the axial and appendicular skeleton with the destruction of the right L1 pedicle and enhancing prostatic nodule consistent with metastatic prostate

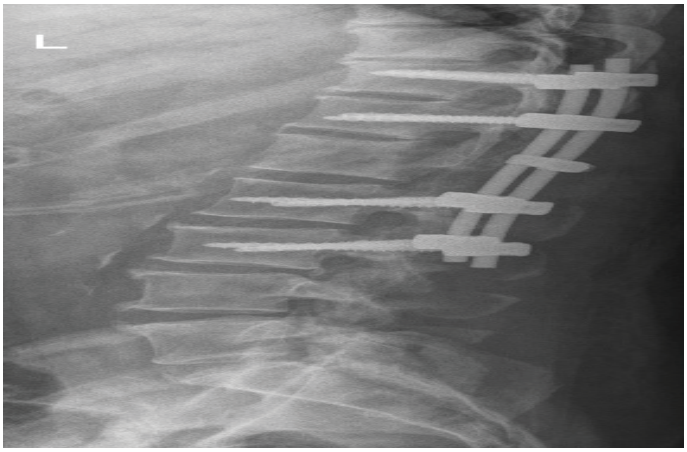

Figure 1. Lateral postoperative radiograph demonstrating bridging fixation across L1 with posterior instrumentation from T 11 to L3.

adenocarcinoma; with elevated serum PSA of 111 mcg/L. There were no features of COVID pneumonia (Figure 1).

He developed paraparesis with bladder and bowel incontinence in the next two days. Clinical diagnosis of cord compression was made and the patient was started on steroids pending MRI confirmation (Figure 1); after two negative PCR results. The patient underwent urgent decompression and posterior instrumentation (Figure 2) at the regional oncology facility. Palliative radiotherapy and hormonal therapy for histopathologically confirmed prostatic adenocarcinoma were administered and he was discharged with follow up.

Case 2

A 50-year-old gentleman with no past medical history presented with severe abdominal pain for two days associated with nausea and vomiting. His heart rate was 146bpm and BP-90/60 requiring fluid resuscitation. There was severe generalized abdominal tenderness with absent bowel sounds.

His serum lactate was 5.1 mmol/L, CRP 335 mg/L, procalciton in 47.8 ng/L, Lipase 488 IU/L, Amylase 463 IU/L, and ALT 42 IU/L. A probable diagnosis of COVID-19 associated pancreatitis was made. Abdominal X-ray,

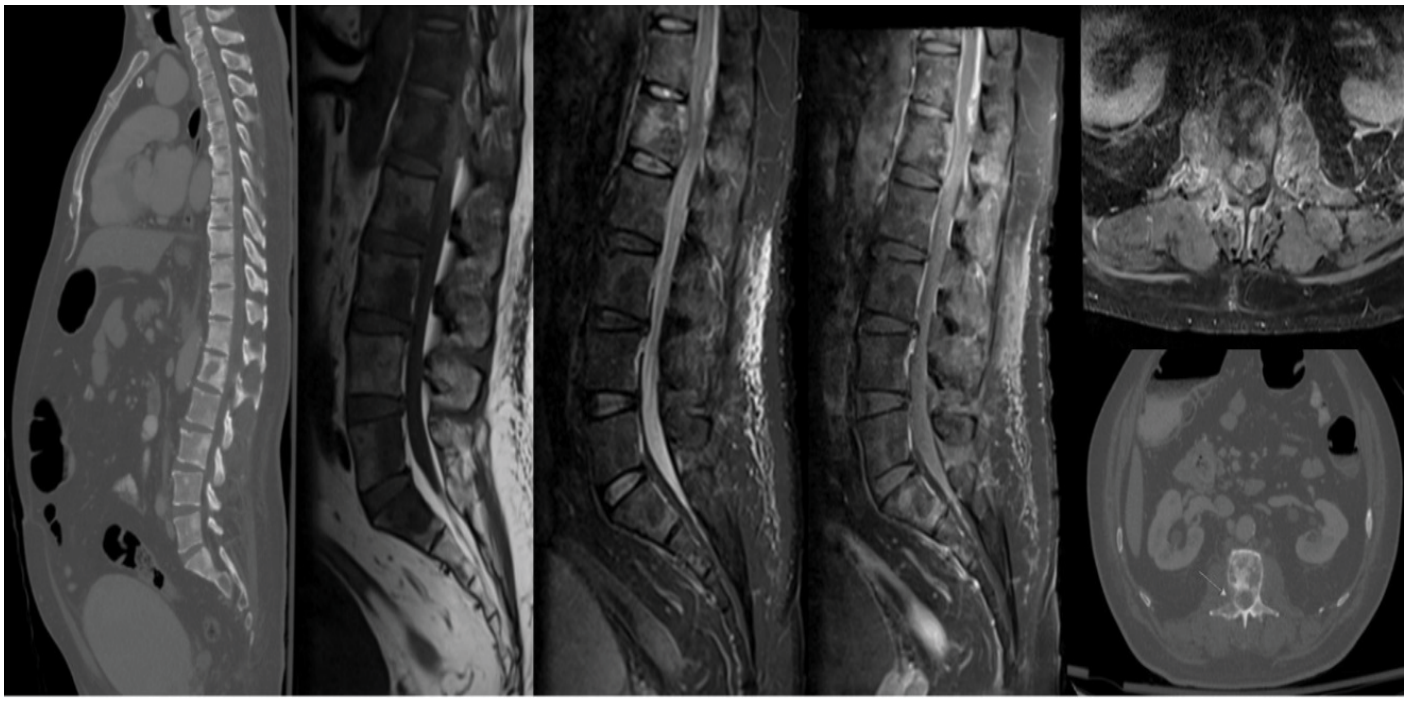

Figure 2. (First column) Sagittal CT reformat: Multiple sclerotic and lytic foci in the vertebral bodies. (Middle column) Sagittal T1-weighted, STIR and Post-contrast MRI: Multiple lumbosacral spine metastases with posterior bulging of the L1 vertebral body and compression of the conus medullaris. (Last column) Axial postcontrast MRI (top right) and CT at L1: Lobular soft tissue mass) with intraspinal extension displacing the thecal sac, based on the right L1 pedicle (arrow).

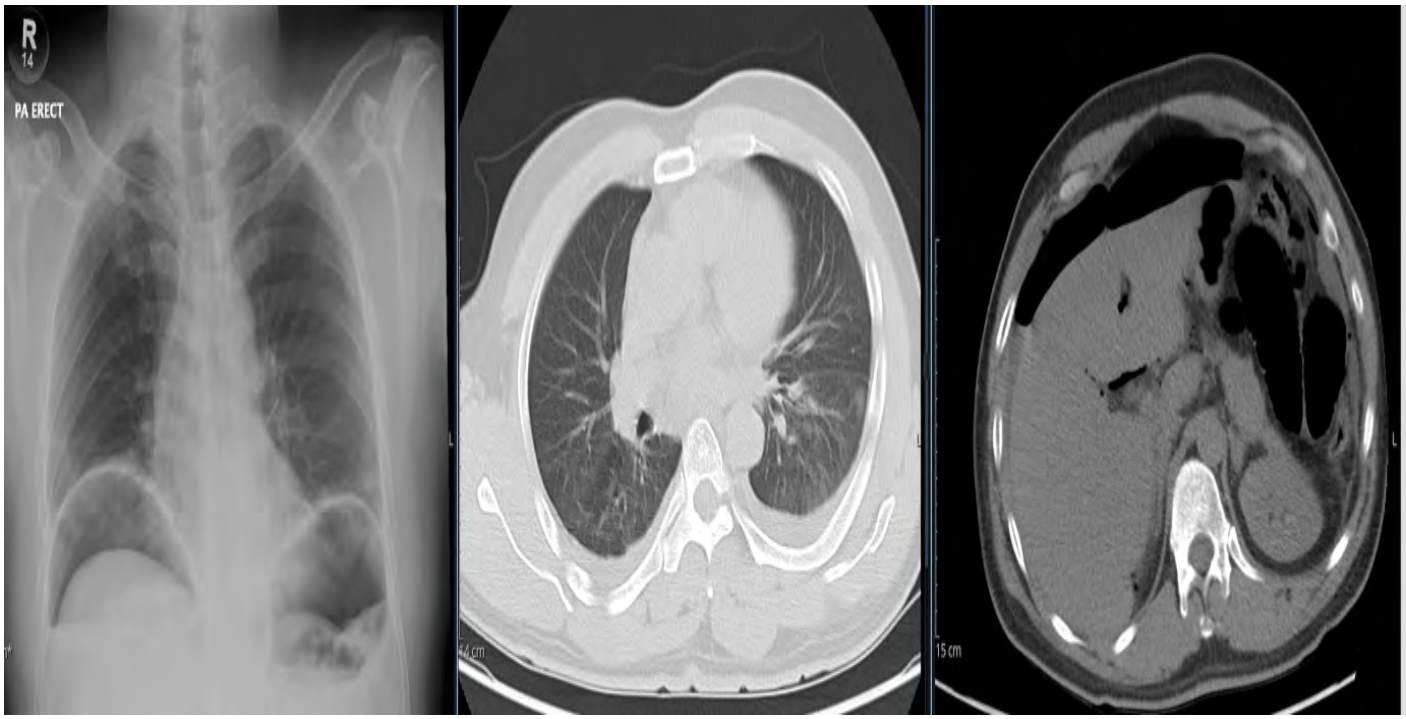

Figure 3. Chest radiograph showed a large amount of free air under both hemi diaphragms. Axial non-contrast CT of the chest (centre image): Bilateral tiny pleural effusions with no features of COVID pneumonia. Axial CT image of the upper abdomen: A large amount of prehepatic pneumoperitoneum with tracking free air at the porta hepatis consistent with bowel perforation.

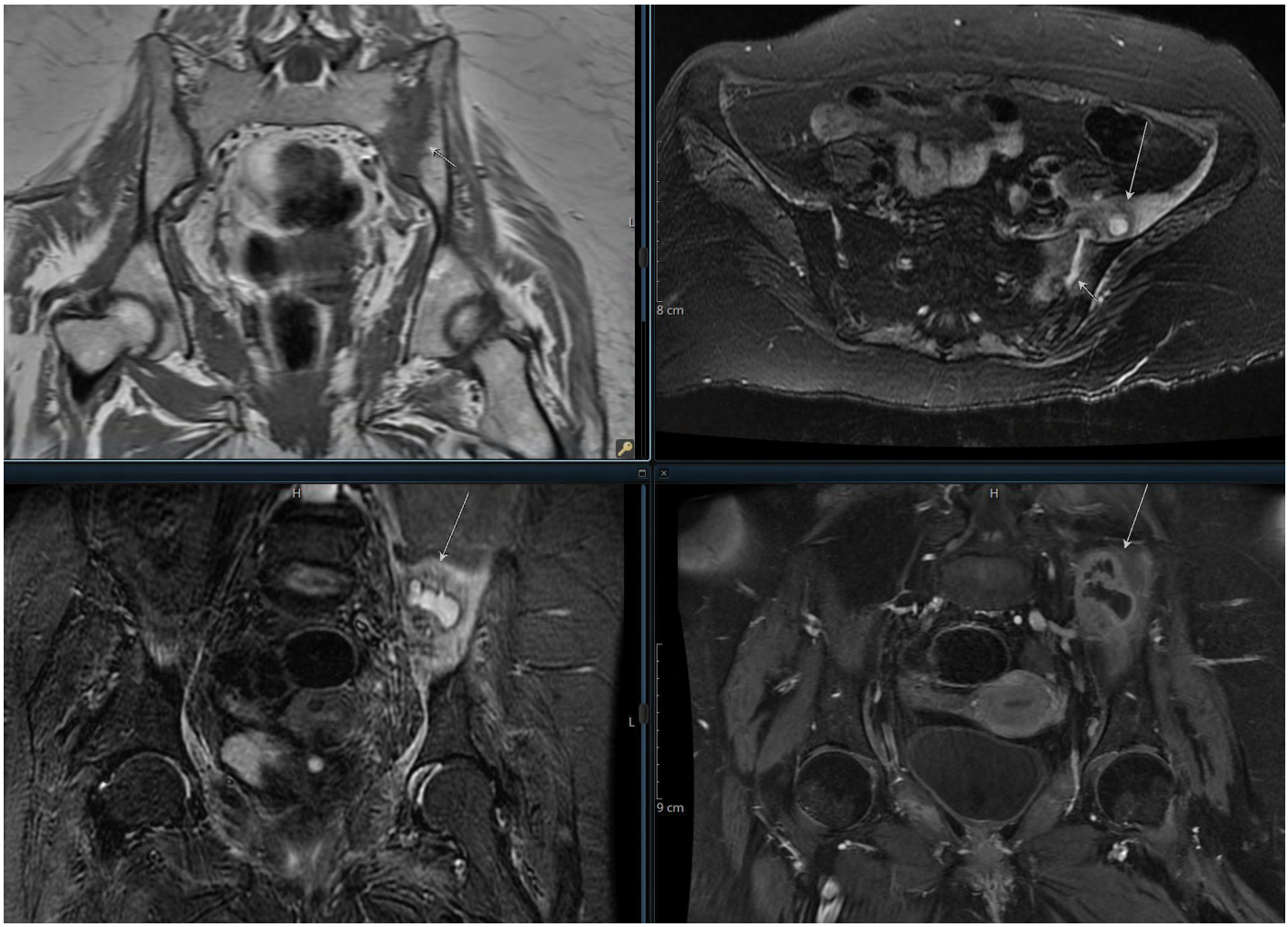

Figure 4. T1- weighted (top left) coronal MR image: Subarticular oedema of the left sacroiliac joint and loss of normal T1 marrow signal in keeping with osteitis (short arrow). Axial (top right), Coronal STIR (bottom left) & Post-contrast (bottom right) MR images: Small left sacroiliac joint effusion (short arrow) with an anterior abscess within an oedematous left iliac muscle (long arrow) consistent with septic arthritis and pyomyositis.

however, showed large amount of pneumoperitoneum consistent with bowel perforation. An HRCT of the chest showed right basal changes with pleural effusions suggestive of aspiration rather than COVID pneumonia (Figure 3).

A decision was made to transfer the patient for laparotomy to the Non-COVID facility as per the regional guidelines. However, due to the patient's worsening clinical condition, he underwent laparotomy at our hospital with the repair of a perforated duodenal ulcer. COVID-PCR result later came back as negative.

Case 3

A 37-years-old lady was referred to suspected pyelonephritis with a short history of dysuria. She had a fall one week ago with worsening left flank to knee pain. There were no respiratory symptoms or history of a recent travel.

Her past medical history included a brain astrocytoma treated with neurosurgery and chemoradiotherapy two years previously with some residual left sided hemiparesis and sphincter dysfunctions.

The initial examination was unremarkable with normal vital signs, GCS 15 and no new focal neurological deficits. Significant labs include CRP 292 mg/L and LDH 296 IU/L. COVID-PCR was also sent. Plain radiographs were unremarkable.

The diagnosis of pyelonephritis was confirmed by a positive urine culture growth of *E. coli* but a positive MRSA blood culture. Infective endocarditis was ruled out on echocardiography. COVID-PCR was initially positive with no clinicoradiological features of COVID pneumonia.

The progressive left hip and knee pain raised clinical suspicion for septic arthritis, requiring further evaluation by MR imaging. This was however delayed for few days pending two negative COVID-PCR results. MRI with contrast did confirm septic arthritis of the left sacroiliac joint and associated focal pyomyositis of the left iliac muscle (Figure 4).

She was back to her baseline mobility after completing six weeks of antimicrobial therapy.

Discussion

Emerging COVID-19 pandemic in the last few months has taken a toll on healthcare providers with a potential risk of colluding their clinical judgement. There is an increased tendency to have a tunnelled vision towards establishing COVID-related diagnoses with a pressing emphasis on COVID-rule out, as highlighted in the described cases.

The first patient with metastatic cord compression had a small delay in clinical diagnosis due to suspicion of underlying COVID infection. Once that was ruled out, he had the required standard of imminent care. The second patient with perforated duodenal ulcer had no features of COVID pneumonia on imaging and awaited transfer to the Non-COVID facility. But due to his clinical deterioration and some system-related delays, he underwent laparotomy at our hospital. The third patient's MRI for septic arthritis responsible for her MRSA bacteraemia was delayed due to pending COVID negative status.

The effect of the COVID-19 pandemic on the treatment and care of patients who do not suffer from COVID-19 infection should not be underestimated [4]. The clinical need should always determine the direction of enquiry and care rather than the positive or negative COVID status. A concerted effort from

healthcare providers and regulatory bodies is required to uphold the basic principles of medicine to ensure better patient outcomes. It goes without saying that COVID or Non-COVID, the standard of care should be uniform across the board.

Taking heed from these examples, we subsequently designated separate MR scanners for imaging in COVID and non-COVID patients. We also started routinely using non-contrast CT's for screening and triage of our patients, during the COVID pandemic along with improved turnout time for our COVID PCR results.

Learning Points

• Clinical acumen should always prevail amidst the COVID-19 pandemic.

• COVID-19 - rule out should not delay diagnostic workup and treatment of other plausible diagnoses.

• Policies, guidelines and pathways should be in place to avoid potential risks for the patients as well as the healthcare providers.

Conclusion

Delayed management of patients with serious illnesses can lead to increased morbidity and even mortality with associated medico legal consequences for the healthcare providers. Devising clinical and diagnostic pathways is essential in preventing avoidable delays and thereby mitigating the potential healthcare risks, particularly during any unfamiliar pandemic like COVID-19 in the future.

References

1. WHO. Coronavirus Disease Dashboard (COVID-19). WHO (2020).
2. Zhu, Na, Zhang Dingyu Dingyu, Wang Wenling and Xingwang Li, et al. A novel coronavirus from patients with pneumonia in China, 2019. N Engl J Med 382 (2020): 727-733.
3. Guan, Wei-Jie, Ni Zheng-Yi, Hu Yu and Wen-Hua Liang, et al. Clinical characteristics of coronavirus disease 2019 in China. *N Engl J Med* 382 (2020): 1708-1720.
4. Rosenbaum, Lisa. The Untold Toll - The Pandemic's Effects on Patients without COVID-19. *N Engl J Med* 382 (2020): 2368 -2371.

How to cite this article: Waqar Haider Gaba, Fatma Mahmoud, Shahad Hag, and Asad Shah, et al. "Are We Getting Tunnel Vision for Non-COVID Patients Amidst the COVID-19 Pandemic?" *J Pulm Respir Med* 10 (2020): 508.