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Case Reports

Medical Education Research Forum 2020

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### **Atypical Presentation of COVID-19 causing Rhabdomyolysis: a case report**

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## Introduction

- COVID-19 is a novel virus that has led to a pandemic in a short period of time
- Information is limited regarding all aspects of the virus such as clinical manifestations
- Overall it appears that the majority of patients present with respiratory and gastrointestinal symptoms
- This case report illustrates a unique presentation of COVID-19

## Case Report

- An otherwise healthy 42 year old presented with subacute lower back pain and thigh pain

### Pertinent history and exam findings:

- No trauma or muscle compression, exertional exercise, prolonged immobilization, hyperthermia, or lightning injury
- No history of medication use or dietary supplements, or illicit drug use
- DTE field technician
- No significant past medical, family, or surgical history
- Bibasilar crackles heard on exam

### Pertinent diagnostic testing:

- Initial CPK 4,100 and creatinine 2.99 (baseline 1)
- Lumbar x-ray negative for acute process
- Influenza A/B negative
- Urine Drug Screen negative
- Urinalysis with 100 protein and large blood
- Hepatitis screen negative
- No hypokalemia noted
- Carboxyhemoglobin and lactic acid within normal limits
- LDH 14,007
- Repeat CPK 313,000 and creatinine 4.11
- Chest x-ray revealed multifocal opacities
- **COVID-19 positive**

### Treatment:

- Given lack of respiratory symptoms, hydroxychloroquine treatment was not given
- He was treated with intravenous fluid
- Discharged home once creatinine began to downtrend from peak of 9.8 and CPK was below 5,000

## Results

Lab	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 13 post-discharge
Creatinine	4.11	6.87	8.02	9.68	9.66	9.8	8.99	8.72	8.22	1.85
CPK, Total	4,100	313,700	215,360	101,002	53,966	23,463	13,606	8,309	4,297	192
LDH, Total	14,007	8,569	2,640	1,210	704	492	523	386	-	-
Ferritin	536	539	482	478	449	450	545	416	-	-
AST	1,424	1,011	660	371	210	148	143	93	-	-
ALT	273	263	233	203	175	171	188	180	-	-
CRP	11.1	10.9	9.8	7.8	4.8	3.0	2.4	1.6	-	-
D-Dimer	3.73	-	6.94	-	12.93	-	-	14.72	-	1.79
High Sensitivity Troponin	55	-	77	-	23	-	-	<18	-	<18

Table 1. Lab values for hospitalization days 1-9 and day 13 post-discharge

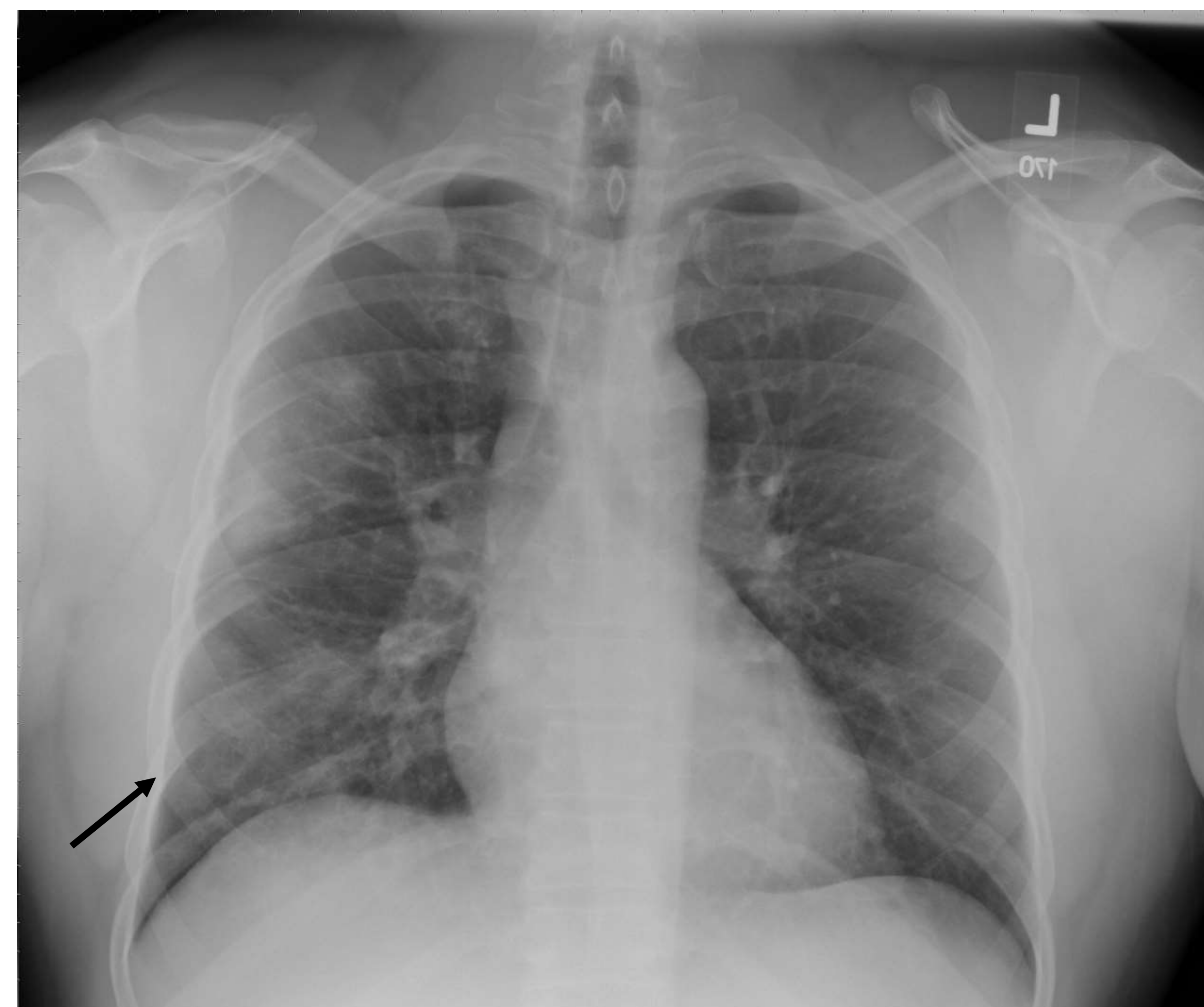


Figure 1. Chest x-ray of the patient

## Discussion

- Since the first case of COVID-19 was detected in December 2019, it has spread to pandemic level
- Generally, patients present with fever, cough, dyspnea and diarrhea that results in a viral pneumonia (1)
- This case report is unique in that the patient had no signs or symptoms of classic COVID-19 infection
- The patient had no other potential cause for his rhabdomyolysis
- Chest x-ray in COVID-19 patients generally have bilateral or unilateral opacities (2)
- There has only been one case report of a COVID-19 patient diagnosed with rhabdomyolysis. That patient presented with typical respiratory symptoms and developed rhabdomyolysis late in their clinical course (3)
- There have been case reports of Influenza inducing rhabdomyolysis. Particularly during the novel virulent H1N1 Influenza A pandemic in 2009. However these patients typically presented with respiratory symptoms. (4)

## Conclusion

- This case illustrates an atypical presentation of COVID-19
- In the setting of a global pandemic of a novel disease, it demonstrates the necessity of keeping an open differential and understanding that there may be many different clinical manifestations of a virus that is still poorly understood.

## References

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