

Suspected Corona Virus Patient Case Study

TRIAGE

Date: Today Time: Now					
Patient Name: Ms. Grace Yi			Age: 35	Gender: F	Weight: 60kg
Presenting complaint: Shortness of breath, cough, fever					
Temp: 39.2	HR: 140	BP: 100/60	RR: 22	O ₂ Sat: 90%	FiO ₂ : RA
Cap glucose: 130			GCS: 15		
Triage note: 35-year-old woman became febrile last night with coryza and woke up acutely short of breath with productive cough, rhinorrhea, and a subjective fever.					
Allergies: None					
Past Medical History: None			Current Medications: Ibuprofen 600mg q 6 hours PRN Acetaminophen 500 mg q 4 hours PRN		

Task Alert:

Review a COVID-19 screening tool: <https://www.chop.edu/clinical-pathway/2019-novel-coronavirus-emergency-clinical-pathway>

What questions would be important to ask this patient?

Are there any respiratory symptoms? Have you been around someone with COVID? When did these symptoms start? Are your symptoms different from your usual seasonal allergies?

Extra Patient Information

A. Further History

She has traveled from China a week ago because she was visiting family.

She also has seasonal allergies.

B. Physical Exam

List any pertinent positive and negative findings

Cardio: Tachycardia	Neuro: WNL
Resp: Crepitus and expiratory wheezes bilaterally, productive cough	Head & Neck: Coryza
Abdo: WNL	MSK/skin: Flushed
Other: She feels very weak and tired	

She screens positive for potential coronavirus exposure due to fever, respiratory symptoms and a high-risk travel history.

What signs and symptoms are most concerning?

Tachycardia, Crepitus and expiratory wheezes bilaterally, productive cough, pt feel weak and tired and Coryza.

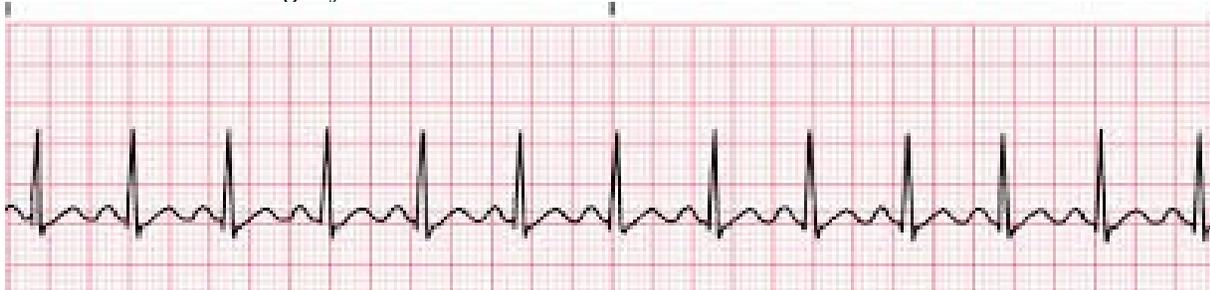
Explain the significance of these signs and symptoms.

All of the symptoms listed are common signs and symptoms of Covid. When patient's present with these symptoms, we suspect flu or Covid-19.

What type of isolation precautions should this patient have? Ms. Yi should have droplet isolation precautions.

Emergency Room: Part 2 Time: 2 hours later

You notice the following rhythm:



What rhythm is this patient experiencing? The patient is experiencing tachycardia.

Before you go into assess the patient describe what PPE you will use: gown, gloves, and n95 mask

Now you are in the patient's room and notice the following changes:

Patient is experiencing worsening shortness of breath with RR: 28 and O₂SAT: 84%. You work with the healthcare team to complete the following orders:

Apply O₂ by NRB mask
Portable chest Xray, BMP, CBC, ECG

Task Alert:

1) Review the chest x-ray results here: <https://emsimcases.com/2020/02/18/suspected-covid-19/>

Results indicate bilateral pneumonia.

2) Create a set of lab values based on what you might expect to see:

CBC:

RBC count: 5.4 million cells/mcL

WBC count: 20,000 cells/mcL

Hematocrit: 38%

Hemoglobin: 14 gm/dL

Red blood cell: MCV: 80 to 95 femtoliter, MCH: 27 to 31 pg/cell, MCHC: 32 to 36 gm/dL

Platelet count: 70,000/dL

BMP: Na, K⁺, Ca⁺, etc.

- BUN: 8 mg/dL
- CO₂ (carbon dioxide): 23 mmol/L
- Creatinine: 0.8 mg/dL
- Glucose: 130 mg/dL
- Serum chloride: 96 mmol/L
- Serum potassium: 6.5 mEq/L
- Serum sodium: 120 mEq/L
- Serum calcium: 8.5

Other Labs? D-dimer and PT

3) How would you know if the non-rebreather mask is working?

Improved O₂ saturation

Emergency Room: Part 3 Time: 15 minutes later

O₂Sat increases to 90% with supplemental O₂
Swabs for flu and coronavirus are sent

The patient will transfer to ICU. Write Report in SBAR frame you would give to the ICU RN.

**S (Situation): Pt is 35-year-old female presenting with shortness of breath, cough, and fever.
Due to high risk travel the patient is suspected to have Covid**

B (Background): The patient recently traveled to China and started having symptoms of Covid when she made it back

A (Assessment): After seeing her x-ray and reviewing the labs, she has been diagnosed with bilateral pneumonia.

R (Recommendations): The patient should be closely monitored and continue using a non-rebreather mask for improvement in o₂ sats.

ICU Room: Part 4 Time: 1 hour later

You complete an assessment

Vitals:	Focused	<u>What actions should you take next? Make a check list below</u>
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T: 38.6 BP: 88/50 Pulse: 130 RR: 30 O ₂ SAT: 86% NRB	Assessment: Patient becoming more hypoxic, agitated. Pale, cool clammy skin	<ul style="list-style-type: none"> Contact physician Prepare for intubation
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Task Alert:

Complete the QSOFA Score found here <https://www.mdcalc.com/qsofa-quick-sofa-score-sepsis>

What are your findings?

The patient scored a 2 and sepsis should be considered.

You call a code sepsis. What actions do you expect next?

While the team is providing care for the patient, the patient's sister comes into the room upset and wanting to know what happened. Describe how you would handle the situation.

I would calmly ask the patients sister to wait in the waiting room. I would ensure her we are doing the very best to make sure her sister receives the care she needs. I would then delegate a nurse's assistant to escort her to the waiting room.

ICU Room: Part 5 Time: 15 minutes later

You must complete the following actions. What order will you complete these interventions. Place them in order of priority highest to lowest.

Interventions:	Prioritized Interventions
<ul style="list-style-type: none"> 1. Start Levophed drip 	3
<ul style="list-style-type: none"> 2. Administer a Normal saline fluid bolus 	2
<ul style="list-style-type: none"> 3. Assist with intubation 	1
<ul style="list-style-type: none"> 4. Call the laboratory to draw blood cultures 	4

Task Alert:

Calculate the rate (ml.hr) for the Levophed drip. The order is to give 4mcg/min. The pharmacist prepares a bag of Levophed with 4 mg/250 ml.

3.75 ml/hr

ICU Room: Part 6 Time: 2 hours later

You complete an assessment

Vitals: T: 37.4 BP: 110/70 Pulse: 90 RR: 14	Focused Assessment: Patient is sedated, course lung sound present throughout,	<u>ABG's noted below.</u> <ul style="list-style-type: none"> pH- 7.34 CO₂- 35 HCO₃-18 pO₂- 200
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O ₂ SAT: 92% (Vented 100% FiO ₂)	secretions thick with yellowish hue	
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What's the significance of the assessment?

The significance of this assessment is to find out if the patient has respiratory acidosis or respiratory alkalosis – or metabolic acidosis or alkalosis. ABG's help us determine if compensation is needed.

Any recommendations for treatments not currently being given? I think the treatments that are being given are suffice.

Follow up considerations:

1) Identify potential exposed persons, nature of exposure and discuss necessary actions.

All of the healthcare team is exposed and the nature of the exposure depends on how long a person was around Ms. Yi and in what capacity. Her family was exposed and the people on the flight and in the airport was exposed. Her family in China and the family she lives with was exposed as well.

2) What are next steps for individuals who may have been inadvertently exposed? Individuals that have been inadvertently exposed should be tested for Covid 19.

3) Discuss potential risk factors involved with the care of this patient. Anyone caring for Ms. Yi could potentially test positive for Covid.

4) Discuss legal ethical considerations that you might consider in caring for this patient. I wouldn't consider any legal problems with taking care of the patient but ethical maybe if the patient did not speak English well.

ICU Room: Part 7 Time: 5 days later

The patient is doing much better, so you the nurse are preparing for the patient for discharge.

Review the COVID-19 Fact Sheet for Nurses pdf document and prepare to educate the patient using the prompts below.

Patient education

1) Choose 3 points under the patient teaching sections general and/or discharge planning

Quarantine

Wash hands thoroughly

Avoid pets as much as possible

2) What will you share with the patient regarding these 3 points?

Regarding these points, I would share how important it is for her to stick to the advice given. If she has further questions I will provide the patient with numbers of people to contact.

3) Consider any visuals or other resources you might use to demonstrate and teach regarding these 3 points.

4) What questions do you anticipate the patient might have once you provide teaching?

How long am I contagious? Please explain isolation.

5) How will you answer these questions?

I will refer the patient to the latest data from the CDC. The patient should quarantine for 5 days and wear a mask for 5 days after the quarantine ends. Isolation means you should be alone and use separate facilities from your family and friends.