TITLE: COVID-19 First Local Transmission in the Philippines, a case report

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KEY WORDS: COVID-19, local transmission, novel coronavirus, SARS-COV2

DESCRIPTION: This is a case of first local transmission of COVID-19 in the Philippines, this report will also highlight clinical manifestations from onset until its detection.

CASE REPORT:

ABSTRACT:
This report consists of the 5th case of COVID 19 screening positive in the Philippines, and the first case of local transmission due to absence of recent travel history. This case report highlights the clinical course of patient's illness from onset until the detection of COVID-19. The importance of early recognition and high index of suspicion through the clinical manifestation will be discussed.

INTRODUCTION:
As of writing almost 100, 000 cases are already identified as a confirmed case of COVID-19, and 6 cases are already confirmed in the Philippines. This report presents the 5th case COVID 19 screening positive in the Philippines, and first case of local transmission due to absence of recent travel history. Local algorithm for suspecting COVID 19 patients included: (1) Acute respiratory illness presenting as Fever >38°C or cough, shortness of breath or other respiratory symptoms

with (1) Travel to or residence in a country/area or territory reporting local transmission of COVID-19 case or any of the following (a) providing direct care without proper PPE for COVID-19 patients (b) staying in the same close environment (c) traveling together in close proximity (1 meter) in any kind of conveyance. This case report highlights the clinical course of patient's illness from onset until the detection of COVID-19.

CASE REPORT:

On February 25, 2020, a 62-year old, Filipino, male, known case of hypertension and Diabete Mellitus Type 2, previous smoker of 20 pack years, came in to the emergency room due to 2-day history of fever associated with cough and headache. Physical examination was unremarkable. Complete blood count, urinalysis and Chest Xray were requested and showed negative results. He was managed as a case of Upper Respiratory Tract Infection and was sent home with Coamoxiclav 625mg/tab 2x a day for 7 days. On March 1, 2020, patient came back at the Emergency room due to persistence of cough and intermittent fever, now associated with generalized body weakness, abdominal discomfort and loss of appetite. No associated symptoms such as headache, difficulty of breathing, shortness of breath, chest pain, loose bowel movement, or dysuria. Patient has no history of travel outside the Philippines. Sexual history revealed that patient had 3 previous wives, and is currently living with his 4th wife. He denied any history of alcohol or illicit drug use.

The physical examination on admission revealed a body temperature of 38.6°C, blood pressure of 140/70 mm Hg, heart rate of 78 beats per minute, respiratory rate of 20 breaths per minute, and oxygen saturation of 97% at room air. Lung auscultation revealed bibasal crackles, and chest radiograph showed hazy opacities in both lower lungs (Figure 1).

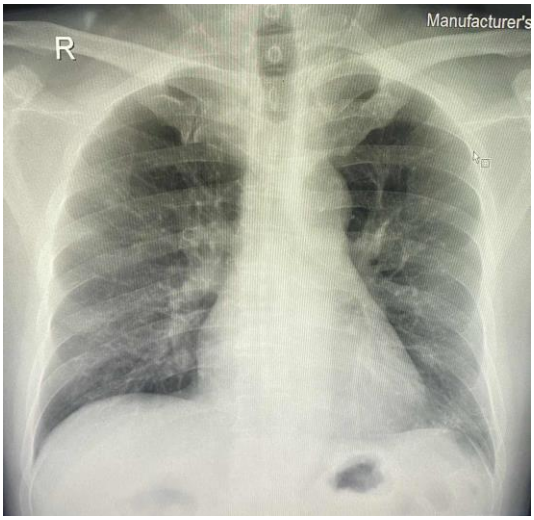

Figure 1. Hospital Day 1 – initial chest xray showed hazy opacities in both lower lungs

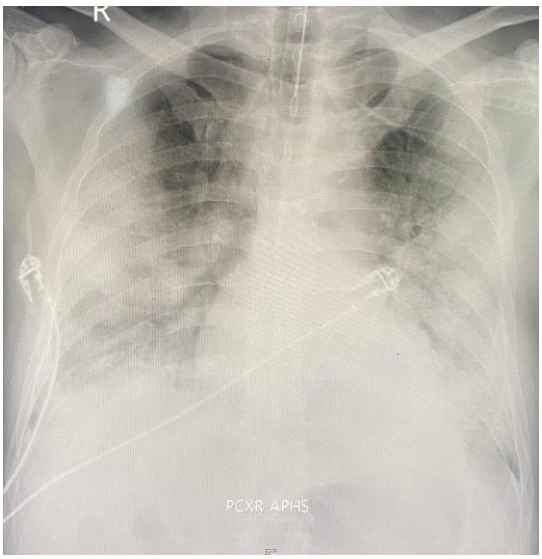

Figure 2. Hospital day 4 – Noted in increase haziness in both lungs

	Reference Range	Day of admission	Hospital Day 2	Hospital Day 3	Hospital Day 4	Hospital Day 5
Hemoglobin	12-18 g/L	13	12.5	12	12.4	11.7
Hematocrit	37-54	39	38	37	38	35
WBC	5-11 x10-9/L	4.24	4.9	5.38	7.2	12.73
Platelet	150-450 x 10-9/L	126	122	126	128	144
Na	136-146 mmol/L	132			136	145
K	3.5-5.2mmol/L	5				
BUN	2.6-6.4mmol/L	6.1				
Crea	53-115 umol/L	95.2			91.25	233.1
Creatinine Clearance						25
Procalcitonin			0.39			
Dengue NS1			Negative			
Sputum GS						
ETA TB gene xpert						
ETA Gram Stain						
ETA CS						
Blood CSX2 ARD						
Pneumonial Panel					Negative	
LDH	100-109 U/L				387	
SGPT	30-65 U/L				7	
PT						88
INR						0.98
PTT						44.4
CTRL						34.2
Trop I	0-0.09ug/L					1.09
COVID 19 Screening						POSITIVE
ETA PCP PCR						PENDING
CBG	140-180	194-206	171-175	184-238	132-351	321-145

Table 1 Clinical Laboratory results, (Red – abnormal values)

Complete blood count showed leucopenia with predominance of segmenters and thrombocytopenia. Patient was as a case of Community Acquired Pneumonia Moderate Risk, and was started on Ceftriaxone 2g IV once a day and Levofloxacin 750mg/tab once a day.

On the second hospital day, patient was still febrile at 38.6°C, repeat complete blood count showed leucopenia and thrombocytopenia and procalcitonin was normal. Patient was comfortable, no difficulty of breathing noted, however, with oxygen saturation of 89-92% at room air. On physical examination, he still had minimal bibasal crackles on both lower lungs. Patient was hooked to O2 at 2 liters per minute with improvement of O2 saturation to 96-97%. On the same day, serial complete blood count monitoring was done. Screening for Dengue was negative.

On the third hospital day, patient had episodes of desaturation as low as 79% at 5 LPM via nasal cannula, still with no noted difficulty of breathing nor shortness of breath. Patient was then hooked to Hi-flow O2 at FIO2 60%-80%. Patient was still persistently febrile, serial complete blood count monitoring showed lymphocyte predominance. He was started on Oseltamivir 75 mg/tab 2x/day.

On the fourth hospital day, patient was noted to have difficulty of breathing with oxygenation status as low as 70%-80%. Arterial blood gas showed partially compensated respiratory alkalosis with inadequate oxygenation at pO2 of 45.6, P/F ratio of 57. Repeat chest radiograph showed increase haziness in both lungs with air bronchogram sign (Figure 2). Patient was hooked to BIPAP at 100% FIO2 with improvement to 99% O2 saturation. Patient was referred to Infectious Disease specialist and antibiotics were shifted to Piperacillin Tazobactam and was also started on Cotrimoxazole. Impression was Community Acquired Pneumonia-High Risk cannot r/o Pneumocystis carinii Pneumonia vs Viral Pneumonia. Full work up for probable pathogen was done. TB GeneXpert, PCP PCR and Pneumonia Panel were requested.

Three to four - hours post hooking to BIPAP patient had desaturation as low as 45%, patient underwent endotracheal intubation. Arterial blood gas after intubation showed uncompensated respiratory acidosis with adequate oxygenation, P/F of ratio 117. Piperacillin Tazobactam was shifted to Meropenem for broader antibacterial coverage. Due to rapidly progressing severe acute respiratory infection and with reported other members of their religion visiting a prayer hall with group gatherings exhibiting respiratory symptoms and fever and with COVID-19 as emerging infection, nasopharyngeal and orophagyngeal swab was sent for COVID -19 Screening. Patient was transferred to the Intensive care unit for closer monitoring and isolation precaution was observed.

Pneumonia Panel result showed negative for following pathogens: Acinetobacter baumannii, Enterobacter cloacae cplx, Escherichia coli, Haemophilus inlluenzae, Klebsiella aerogenes, Klebsiella oxytoca, Klebsiella pneumoniae grp, Moraxella catarrhalis, Proteus, Pseudomonas aeruginosa, Serratia marcescens, Staphylococcus aureus, Streptococcus agalactiae, Streptococcus pneumoniae, Streptococcus pyogenes, Chlamydia pneumoniae, Legionella pneumophila, Mycoplasma pneumoniae, Adenovirus, Coronavirus, Human Metapneumovirus, Human Rhinovirus/Enterovirus, Influenza , Influenza B, Middle East RS Coronavirus,

Parainfluenza virus, Respiratory Syncytial Virus, MREJ, mecA/C, KPC, NDM, Oxa-48-like, VIM, IMP, and CTX-M.

At the Intensive care unit, patient had hypotensive episodes. He was given hydration and was eventually started on norepinephrine. Succeeding arterial blood gases showed moderate to severe acute respiratory distress syndrome.

On 5th hospital day, Severe Acute Respiratory Syndrome – Coronavirus -2 virus detection by Polymerase Chain Reaction showed positive for SARS-COV-2. Patient was transferred to a government hospital, for continuity of care.

The Philippine Department of Health confirmed localized transmission on the country after verification with Bureau of Immigration that the patient had no recent travel history, making him the first localized transmission in the country.

The wife of the patient was also reported to develop Influenza-like symptoms which include non-productive cough, and body malaise. Her symptoms started March 1 and was in close proximity with the patient during the time he was symptomatic. She was admitted at the same institution as her husband, but on March 5, 2020, when her husband tested positive, she was also transferred to the same government hospital for work-up possible COVID-19 infection which was also noted to be positive for the infection on March 7, 2020 making her the 7th case of COVID-19 in the Philippines and second case of local transmission.

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