International Journal of Research in Medical Sciences
Lal R et al. Int J Res Med Sci. 2021 Mar;9(3):891-894
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012

DOI: https://dx.doi.org/10.18203/2320-6012.ijrms20210897

Case Report

Can we afford to forget the old killer (tuberculosis) in this COVID-19 pandemic: a case report of scrofula with COVID-19 in a health care worker

Roshan Lal[1]*, Rajesh Bhawani[1], Nitesh Kumar[1], Jyoti Bala[2], Sharab Chhopal[2]

[1]Department of Medicine, SLBSGMCH Mandi, Nerchowk, Himachal Pradesh, India
[2]Department of Pathology, SLBSGMCH Mandi, Nerchowk, Himachal Pradesh, India

Received: 12 January 2021
Accepted: 08 February 2021

***Correspondence:**
Dr. Roshan Lal,
E-mail: 450mph@gmail.com

ABSTRACT

In the current scenario of COVID-19 pandemic, we are encountering COVID-19 patients with vague symptoms and in association with many other diseases. We are reporting such a case where neglecting other cause of pyrexia in a patient of COVID-19 would have resulted in disastrous consequences. A young 22 years aged female was admitted to our hospital as COVID-19 with right supraclavicular lymphadenopathy, she was subjected to FNAC of right supraclavicular lymph node. In RT-PCR Mycobacterium Tuberculosis was detected. After three days of starting on Antitubercular drugs she became afebrile. It is important to ensure early diagnosis and continuity of services for tuberculosis along with effective and rapid response to COVID-19 pandemic, so that anticipated increase in TB related deaths during this pandemic can be prevented.

Keywords: Scrofula, Extra pulmonary tuberculosis, COVID-19

INTRODUCTION

COVID-19 (Corona Virus Disease-19) was first reported from Wuhan city, Hubie Province, China in December 2019.[1] In late December 2019 Wuhan reported clustering of cases of pneumonia of unknown origin. A new virus from family of corona viruses was considered to be the causative agent and was called as novel corona virus initially. Later it was named as Severe Acute Respiratory Syndrome Corona Virus -2 (SARS-CoV-2). On the other side tuberculosis (TB) is one of the oldest documented infectious diseases caused by bacteria Mycobacterium Tuberculosis. Scrofula is the Latin word for brood sow, and it is the term applied to tubercular lymphadenitis of neck.[2]

CASE REPORT

We report a case of 22 years old female, student of BSc Nursing at Hoshiarpur, Punjab. She is a resident of Mandi, Himachal Pradesh. During initial phase of lockdown, she returned on 18th March 2020 to Una, Himachal Pradesh and was in Home quarantine at Una. She had history of fever in last week of April; for this she took some over the counter medications in form of antibiotics and antipyretics. Her fever settled after taking medication. She came back to her native place at Mandi, Himachal Pradesh on 7th May 2020.

She again developed fever on 15th May 2020. Temperature was documented up to 103-degree Fahrenheit, associated with chills, sweating without diurnal variation. Her oropharyngeal and nasopharyngeal swabs were taken on 19th May to rule out COVID-19. As she was tested positive for COVID-19, she was admitted to SLBSGMCH Mandi (COVID dedicated tertiary care center) on 20th May. She had history of occasional nonproductive cough. There was no history of shortness of breath, sore throat, chills, myalgia, chest pain, loose stools, pain abdomen, headache, anosmia or dysgeusia.

Her past history, personal history, family history and menstrual history was noncontributory.

On admission she had tachycardia, temperature of 103-degree Fahrenheit, normal SpO_2 and normal respiratory rate. On general physical examination she had right supraclavicular lymphadenopathy (Figure 1). There were multiple firm, non-tender, matted lymph nodes in right supraclavicular fossa. Overlying skin was normal and lymph nodes were not fixed to underlying structures. Rest of the general physical and systemic examination was noncontributory.

Table 1: Investigations.

Investigations	Values
Hb	10 gm%
MCV	82 FL
TLC	6300/mm^3
Platelets	275000/mm^3
Neutrophills	75%
Lymphocytes	21%
ESR	130 mm in first hour
Random blood glucose	112 mg%
Creatinine	0.6 mg%
AST/ALT	24/24 Units
ALP	67 units
CBNAAT for MTB (FNAC of lymph node)	Detected (Rif resistance not detected)
Zn Stain	Not detected
HPE (lymph node)	Suggestive of tubercular lymphadenitis
CxR PA	Within normal limits
RT-PCR for COVID-19	Detected on 19 May, not detected on 29th May
HIV ELISA	Non reactive

Her lab investigations (Table 1) revealed normocytic normochromic anemia (Hb=10gm%), raised ESR (130 mm in first hour). Other blood investigations were unremarkable. She was subjected to Fine Needle Aspiration Cytology (FNAC) of lymph node and histopathological examination revealed inflammatory smear with epithelioid granuloma and lymphoglandular bodies and abundant necrosis in background with possibility of tubercular etiology (Figure 3 and 4).

She was managed as COVID-19 (mild severity) with Extra Pulmonary Tuberculosis with normocytic normochromic anemia, with tablet Azithromycin 500 mg once a day, Hydroxychloroquine 400 mg bd on day one then 200 bd, vitamin-C 500 mg OD, Zinc 50 mg OD, Acetamenophen 500 mg SOS, Rifampicin 150mg (3tablets), Isoniazid 75mg (3 tablets), Ethambutol 250 mg (3 tablets), Pyrazinamide 400 mg (3tablets). She was discharged from hospital on day 18th of her admission on Anti Tubercular Therapy.

Figure 1: Right supraclavicular lymph node.

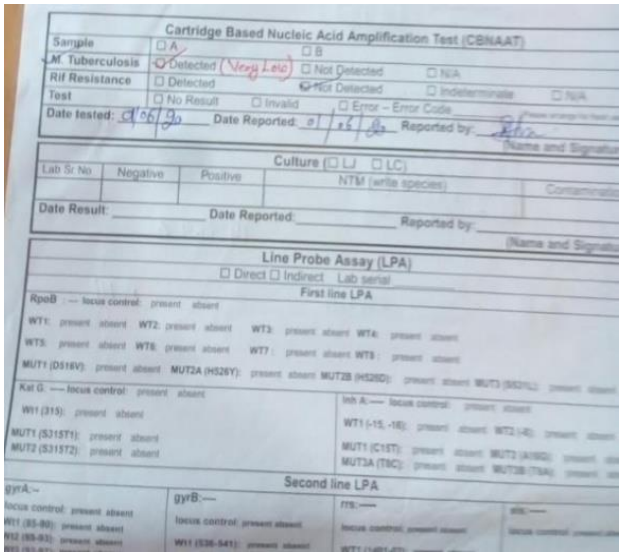

Figure 2: Report of CBNAAT for *Mycobacterium tuberculosis.*

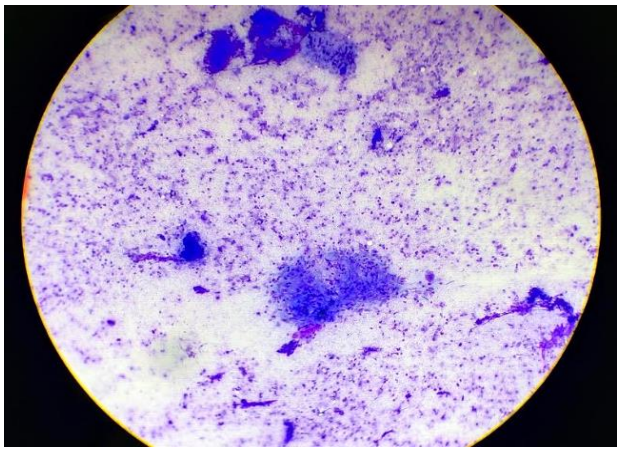

Figure 3: Epithelioid cell granuloma with necrosis.

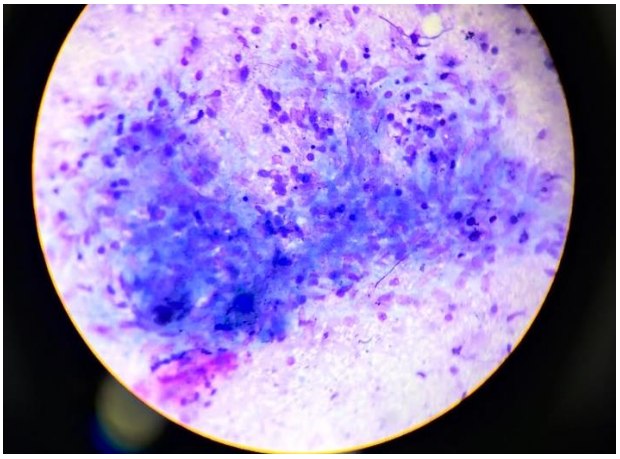

Figure 4: Epithelioid cell granuloma (40X).

DISCUSSION

Much is known about mycobacterium tuberculosis but we have a very little experience with COVID-19. Even before COVID-19, TB has a notorious track record. Both the diseases affect lungs and symptoms overlap. Corona viruses are enveloped RNA viruses with a capability to infect a wide range of hosts. SARS-CoV-2 belongs to the *Sarbecovirus* subgenus of the *Coronaviridae* family. These can cause various diseases like common cold, Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS) in humans.[3] Droplets, aerosols and fomites are various modes of transmission. It has been found to be more stable on plastic and stainless steel (up to 72 hours) compared with copper (up to 4 hours) and cardboard (up to 24 hours).[4] Incubation period for this virus is also variable, ranging from 1-14 days. About 97.5% of patients develop symptoms within 11.5 days of infection.[5] In China, 87% of confirmed cases were aged 30 to 79 years and 3% were aged 80 years or older. Approximately 51% of patients were male.[6]

Tuberculosis is caused by Mycobacterium Tuberculosis aerobic, acid fast bacilli. It's a disease of developing world mainly and is also a leading cause of death due to infectious diseases. Lungs are predominantly involved but extra pulmonary involvement can be there. Extra pulmonary tuberculosis (EPTB) has nonspecific features. EPTB has incidence of 10-20% in immunocompetent and 40% in people living with HIV. Lymph nodes are commonest extra pulmonary site to get involved.

Our patient being a health care worker had risk of exposure to both SARS COV-2 and Mycobcaterium Tuberculosis, she had a travel history from a red zone to green zone 4 days back. Although she had fever about three weeks earlier also for which she could not get a consultation because of nationwide lockdown, so she took some over the counter antibiotics and her fever settled.

As she became symptomatic in form of high-grade fever at her native place after 2 weeks of first episode of fever, she was diagnosed as COVID-19 initially and later as associated EPTB. It has been seen in China and Korea during COVID-19 pandemic as the resources were diverted for COVID-19 it led to disruption of services for tuberculosis. Long distance travel has been prohibited, due to lockdown people could not access health services, health system has collapsed at places of heavy burden of COVID-19 patients, priority is being given to COVID-19 patients in comparison to other diseases. Increased fear among health care workers for COVID-19 led to under reporting of TB patients. In Korea the hospitals built for drug resistant tuberculosis have been used for COVID-19 patients, so there has been serious breach in continuity of TB services, so a spike in TB incidence, given to delayed diagnosis and increased transmission is expected.[7]

Similarly, in our case patient could not visit to health care facility due to nationwide lockdown and so was missed during first episode of fever. During second spike of fever, she was again initially managed as COVID-19 only. As for now LAP has not been seen in association with COVID-19 so FNAC of her lymph node was done to look for any association but HPE was suggestive of tubercular picture and also CBNAAT for MTB was also detected, so she was diagnosed to have EPTB also. In this case diagnosis of TB was delayed due to COVID-19 pandemic. She became afebrile on 3rd day after starting ATT.

Tubercular lymphadenitis of the neck is known as scrofula also, it is caused by tubercular or non-tubercular mycobacterium. It is the presenting form in 5% of the cases. However, in immunocompromised patients one third of the patients may present as scrofula.[8]

World health organization (WHO) on its information note on Tuberculosis and COVID-19 pandemic, anticipated that in view of COVID-19 pandemic if there is 25% reduction in detection of tuberculosis globally due to disruption of TB services, it may lead to 13% increase in TB deaths.[9]

CONCLUSION

It is important to ensure early diagnosis and continuity of services for tuberculosis along with effective and rapid response to COVID-19 pandemic, so that anticipated increase in TB related deaths during this pandemic can be prevented.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. David J Cennimo.Coronavirus Disease 2019 (COVID-19). Medscape. 2020.

2. Lewis MR. Scrofula Overview of Scrofula Drugs & Diseases > Otolaryngology and Facial Plastic Surgery. Updated: 10 May 2019.
3. Zhu N, Zhang D, Wang W. A novel coronavirus from patients with pneumonia in China, 2019. N Engl J Med. 2020;382(8):727-33.
4. Doremalen VN, Bushmaker T, Morris DH. Aerosol and surface stability of SARS-CoV-2 as compared with SARS-CoV-1. N Engl J Med. 2020;382(16):1564-7.
5. World Health Organization. Novel coronavirus (2019-nCoV) situation report - 6. 2020.
6. Liu Z, Bing X, Zhi XZ. Novel Coronavirus Pneumonia Emergency Response Epidemiology Team. The epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (COVID-19) in China. 2020;41(2):145-51.
7. Madhukar Pai. COVID-19 Coronavirus and Tuberculosis: We Need A Damage Control Plan. Forbes. 2020.
8. Scrofula CJ. Available at: www.emedicine.com/ent/topic524.htm. Accessed on 20 September 2008.
9. World Health Organisation. World Health Organization (WHO) Information Note Tuberculosis and COVID-19 on 11 May 2020.

Cite this article as: Lal R, Bhawani R, Kumar N, Bala J, Chhopal S. Can we afford to forget the old killer (tuberculosis) in this COVID-19 pandemic: a case report of scrofula with COVID-19 in a health care worker. Int J Res Med Sci 2021;9:891-4.