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Original Research Article

Tuberculosis health services during advent of COVID-19 pandemic in Sonipat district of Haryana

Murugadass Narendran*, Anita Punia, Ramesh Verma, Deepika Kataria, Jagmohan Singh

Department of Community Medicine, BPS Government Medical College for Women, Khanpur Kalan, Sonepat, Haryana, India

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***Correspondence:**
Dr. Murugadass Narendran,
E-mail: narendranofficial@gmail.com

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ABSTRACT

Background: India put efforts to achieve TB free status by 2025 but, advent of COVID-19 Pandemic compelled to repurposing of health facilities and services to manage the situation, which greatly affected the TB management in the country. This study was aimed to find out the situations faced by Health care providers in diagnosis and initiation/continuation of ATT under NTEP during the COVID-19 pandemic period.
Methods: This descriptive cross-sectional study conducted in Sonepat District of Haryana State among Medical officers posted in Health Centres and Lab Technicians posted in Designated Microscopy Centres, responsible for managing Tuberculosis during second and third quarters of 2020. Data were collected using separate, pretested semi-structured schedules and results were compiled and described in percentages and proportions.
Results: Almost half (54%) of the LTs were posted at DMCs daily. Only three of the facilities had CB-NAAT facilities, of which two (66.66%) were partially diverted for COVID-19 testing.
Majority (68.2%) of the MOs reported regular OPD facilities at their facilities during lockdown, with regular TB diagnostic lab facilities (68.2%). More than 81% of the MOs reported non-availability of In-Patient (IP) facilities during lockdown, and diversion of staff for COVID-19 was observed as the major reason (66.7%) for facility non-availability.
Conclusions: The pandemic affected the provision of TB services in the region. Preparedness, timely interventions on regular feedbacks can mitigate such difficulties in future.

Keywords: Public sector, Health providers, North-India, Tuberculosis

INTRODUCTION

Tuberculosis (TB) is a disease which affected 10 million people worldwide in 2020 alone.[1] Around two billion people were infected with tuberculosis, accounting for one quarter of the world's population. As on 2020, India, along with 30 high burden countries, accounted for a cumulative of 86% of the total incident cases. [2] Because tuberculosis is a disease that may be prevented, through high-quality laboratory diagnostic and health care services,[3] in 2014 and 2015, all Member States of WHO and the United Nations (UN) committed to ending the TB epidemic, through their adoption of WHO's End TB Strategy and the UN sustainable development goals (SDGs). Efforts to step up political commitment to the fight against TB intensified in 2017 and 2018.[2] India, in the year 2019 managed to bring down the mortality due to TB to 79000,[4] with an ambition to end TB by 2025 and revising its Revised National tuberculosis control programme (RNTCP) into National tuberculosis elimination programme (NTEP) on January 2020.[5] This was halted due to COVID-19 Pandemic, first case of which was reported from India on 30 January 2020.[6] Although there are reports and researches available to understand the performance of the programme, the knowledge on initiation and continuation of anti-tubercular therapy (ATT) with respect to the health care providers

namely the Doctors and the Lab technicians who aided in the diagnosis and initiation and follow-up of ATT of these patients, during the COVID-19 pandemic period in Sonipat district, is sparse. This study was aimed to find out the situations faced by Health care providers in diagnosis and initiation/continuation of ATT under NTEP during the COVID-19 pandemic period.

METHODS

This descriptive cross-sectional study was done among Health care providers namely, medical officers (MO) posted at primary health centers (PHCs) and community health centers (CHCs) and lab technicians (LT) posted at designated microscopy centers (DMCs) from public sector, who were involved in Diagnosis and Treatment of Tuberculosis in Sonipat District of Haryana during the advent of COVID-19 Pandemic period (Second and third quarters of year 2020). During the study period, Sonipat district had 30 PHCs and six CHCs, and 11 functional DMCs. Assuming that one MO from each of the health centres took charge of TB treatment, one concerned MO from each of the District's 30 PHCs and six CHCs and TB-LTs posted in the 11 DMCs in Sonepat district during the study period were sampled.

Details of the study participants were obtained from the District Tuberculosis Office of Sonipat. The study participants were contacted by the researcher telephonically and appointments were fixed at their work stations on a date and time convenient to them. The researcher personally met the study participants at their workstations at the time of appointment, the purpose of the study was explained to them, confidentiality assured and their written consent to participate in the study were obtained. A separate pretested open-ended schedule was used to interview and obtain data from each of category of study participants. Those who were not available to contact after three attempts by researcher to contact and those who refused consent were excluded from the study. Data collected were compiled in an excel sheet and results were expressed in appropriate measures of central tendency, percentages and proportions.

Operational definitions

Therapy initiation time delay/delayed therapy initiation: Therapy initiation time beyond 1 day of TB diagnosis (day 0).

Treatment interruption

Skipping of anti TB drug consumption for at least a day during the course of therapy was considered as treatment interruption.

RESULTS

Ten lab technicians and twenty two medical officers could be contacted for the study. Almost half (54%) of the LTs were posted at DMCs daily, more than 81% of the facilities had their TB Lab diagnostic services functional, with more than 72% of them having adequate material supply to the facilities. Only 3 (27.3%) of the facilities had CB-NAAT facilities, of which 2 (66.66%) were partially diverted for COVID-19 testing (Table 1).

Table 1: Details of functioning of DMCs in study period as reported by the LTs during the interview (n=11).

Services	Details	N	%
Duty postings at the venue	Posted Daily	6	54
	Posted intermittently and diverted for COVID19 duty	5	45
Services at the facility	Suspended	2	18.2
	Services available	9	81.8
Material supply at facility	Adequate	8	72.7
	Insufficient	1	09.1
	Services were suspended	2	18.2
CB-NAAT facility availability	Yes	3	27.3
	No	8	72.7
Use of CBNAAT facility	Available for TB	1	33.33
	Partially diverted for COVID19	2	66.66

Table 2: Profile of Medical Officers (n=22).

Attributes of MO	Details	N	%
Gender	Male	15	68.2
	Female	7	31.8
Status of training for TB control	Yes	15	68.2
	No	7	31.8

Table 3: Details of status of TB control services at their facility during the study period (n=22).

Facilities/Services	Details	N	%
OPD facilities during lockdown	Regular	15	68.2
	Irregular	6	27.3
	Suspended	1	04.5
TB diagnosing lab facilities during lockdown	Regular	15	68.2
	Irregular	6	27.3
	Suspended	1	04.5
ATT drug supply	Adequate	20	90.9
	Out of stock	2	09.1
DOTS providers	Available	19	86.4
	Not available	3	13.6
Delay in ATT initiations	Yes	4	18.2
	No	18	81.8
Interruptions in ATT	Yes	2	09.1
	No	20	90.9
Reason for ATT interruptions	Non-follow up by patients	2	100
IP facility during lockdown	Yes	4	18.2
	No	18	81.8
Reasons for non-Availability of services (N=18)	Reassignment of facility for COVID-19	6	33.3
	Diversion of staff for COVID-19	12	66.7

Majority (68.2%) of the medical officers were male and had undergone training under programmes targeting TB control (68.2%) (Table 2).

Majority (68.2%) of the MOs reported regular OPD facilities at their facilities during lockdown, with regular TB diagnostic lab facilities (68.2%), with 90.9% reporting adequate ATT drug supply and 86.4% having DOTS providers.

More than 81% of them reported no interruptions of ATT for patients at their facilities, and among those who reported interruptions, the reason was found to be non-follow-up by patients. More than 81% of the MOs reported non-availability of IP facilities during lockdown, and diversion of staff for COVID-19 was observed as the major reason (66.7%) for facility non-availability (Table 3).

DISCUSSION

The proportion of LTs who were posted at their DMCs 'intermittently' suggest that the testing services of the labs during the advent of the pandemic were limited to a few days a week. This, along with patient level barriers reduced the number of cases tested, reflecting on the decreased notification rates.

Partial utilization of CB-NAAT facilities for COVID-19 testing also contributes to the case notification reduction. These, along with those facilities which were non-functional could have added to the reasons for the high proportion of patients getting diagnosed at District Hospital level, thereby contributing to the delays.

Similar situation was observed at Surat during the lockdown period. [2] Our results in this regard reflect the claims and perceptions of the medical officers on the TB facilities in the district during the study period. Our proportions on many of these variable are in agreement with those observed in a global review.[7] This could be due to uniformity observed across nations in resource handling to tackle the pandemic, nevertheless, the variations observed could be due to differences in documentations and performances of health systems in these regions. Detailed studies and timely necessary interventions on the functioning of the health systems during periods of crisis are lacking and are hence warranted for understanding and facing crisis situations such as the pandemic better in future.

Limitations and strengths

Limitations was the data was collected based on verbal responses given by the study participants. This could result in the possibility for recall bias and truth bias.[8] Responses among the eligible subjects who could not be contacted or refused consent may be different from that observed among those who participated in the study. This is a descriptive cross-sectional study and hence, cause and effect relationships cannot be established. Strengths were the study tool used was semi structured to allow room for responses that could be less anticipated but prevalent in the region and the descriptive nature of the study design allows room for generation of multiple hypothesis.

CONCLUSION

The pandemic affected the provision of TB services in the region. Preparedness, timely interventions on regular feedbacks can mitigate such difficulties in future.

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