

RAPID APPRAISAL OF JUNIOR AND SENIOR RESIDENTS WITH RESPECT TO UTILITY OF CBNAAT IN SETTING TO TUBERCULOSIS ILLNESS

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ABSTRACT

Objective: This study was rolled out to survey the understanding of junior and senior residents regarding utility of cartridge-based nucleic corrosive enhancement test (CBNAAT) in setting to tuberculosis (TB) ailment.

Method: The review was led among junior and senior resident specialists right now working at a medical college. Concentrate on subjects was evaluated utilizing a semi-organized poll. Information level of the subjects was arranged into three classes based on their insight score. Disposition was surveyed on a five-point Likert Scale.

Results: About 58.4% (n=70) occupants had acceptable information level. Members having postgraduate certification would be advised to information level (agreeable/great) when contrasted with those having MBBS degree. Positive affiliation was seen between information level with capability and long periods of involvement. About 64.16% (n=77) inhabitants rehearsed CBNAAT testing for TB location. About 38.33% (n=46) did not answer when gotten some information about number of tests being sent for CBNAAT testing consistently. Most normal sent example was sputum, trailed by discharge, and body liquids.

Conclusion: Practices for CBNAAT utilization stays low as reflected in the current review notwithstanding having great information scores. This brings up toward information practice gap. Measures should be taken with the goal that they set information up as a regular occurrence and fill the current information practice gap.

Keywords: CBNAAT, Hospital residents, Tuberculosis.

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INTRODUCTION

Tuberculosis (TB) keeps on being a significant reason for mortality and horribleness in numerous nations around the world. Clearly, India keeps on being a high TB trouble country [1]. The rate of TB was 26.9 lakh cases in 2019 in our country [2]. The most widely recognized strategy for microbiological finding of TB is Corrosive quick microscopy. Overreliance on culture frequently prompts significant deferrals, compromising patient consideration and outcomes [3]. In such situation, job of cartridge-based nucleic corrosive enhancement test (CBNAAT), a constant PCR-based technique has shown promising outcomes.

CBNAAT has high awareness for both aspiratory and extrapulmonary TB and then again it can identify rpoB quality transformations that give rifampicin-obstruction (RR-TB) [4,5]. GeneXpert is the CBNAAT framework is being utilized in our country. It is accessible at the vast majority of the chest facilities in region clinics and clinical universities. Its utilization is suggested for finding of medication safe TB in hypothetical cases as well as in analysis of TB.

At medical care habitats, occupant specialists being the primary resource for patients subsequently should be sharpened toward ongoing updates in RNTCP rules including use of CB-NAAT so quick and exact analysis of TB can be made. Therefore, this study was planned to assess the perceptions junior and senior residents with respect to utility of CBNAAT in setting to TB illness.

METHODS

Study design

This study was cross-sectional study.

Study setting

This study was hospital-based study.

Sample size

This study was 120.

This study was led among junior and senior resident doctors as of now working at a tertiary consideration showing medical school of northern India. Every one of the occupant specialists in various long stretches of their residency from different disciplines were remembered for this review. Just the people who were not ready to partake were prohibited. Study participants were interviewed using a study tool.

Study tool was a semi-structured questionnaire. Tool was prepared in consultation with specialists of the field; hence, face legitimacy was laid out. Pilot testing was finished on ten subjects and in light of that a couple of changes were made in the poll. The poll had four areas. Segment 1 had questions connected with socio-segment status. The second part of the survey managed information on concentrate on subjects on clinical signs, sorts of tests supported, example assortment, transport, and capacity for CBNAAT. One imprint was assigned to each question. On the off chance that the member did not address that inquiry, the reaction was set apart as inaccurate and in this way, the all-out gather reaction was determined. Information score was determined out of an all-out limit of 16. Information level of the subjects was characterized into three classifications based on their insight score. Those having score under 5 were named poor, between 6 and 10 were normal and 11–16 as having great information level. Third part caught disposition of the inhabitants toward CBNAAT for TB conclusion. Demeanor was surveyed based on three aspects – utility of CBNAAT in discovery of pneumonic and

extra-pneumonic TB, its utility in distinguishing rifampicin opposition and by and large fulfillment with this test, and utilizing a five-point Likert Scale. Every one of the people who concurred or emphatically concurred were considered to have inspirational perspective and those, who deviated, unequivocally differ or did not answer, were considered to have pessimistic reaction to this test. Segment 4 was contained inquiries connected with genuine practices among occupants relating to CBNAAT testing and their perspectives on everyday issues looked by them as for this test.

The study was started in the wake of acquiring endorsement from the IEC committee of the medical college. Informed consent was gotten subsequent to clearing up the nature and motivation behind study for the review subjects. Every one of the surveys alongside other applicable information was physically checked and was, then, coded for PC section. After aggregation of the gathered information, investigation was finished involving SPSS, version 20 (IBM, Chicago, USA). The results were expressed using appropriate statistical methods. Chi-Square test was applied to test difference if any. Significance level was set at $p < 0.05$.

RESULTS

This study was led among 120 eligible subjects working in different disciplines. The greater part of study members were in the age bunch 29–32 years ($n=62$, 51.7%). Male ($n=61$, 50.8%) to female ($n=59$, 49.2%) proportion was practically equivalent. Larger part ($n=84$, 70%) were senior inhabitants having postgraduate certification. Cooperation from careful and associated branches was digit more ($n=65$, 54.2%). About 57.5% ($n=69$) inhabitants were having over 4 years of post-MBBS experience yet shockingly just 15.8% ($n=19$) had gone through any TB explicit preparation (Table 1).

About 58.4% ($n=70$) eligible study subjects were having satisfactory knowledge level, 35.8% ($n=43$) had good, whereas 5.8% ($n=7$) had poor level of knowledge (Fig. 1).

Concentrate on results uncovered that in view of information score, members having postgraduate certification would do well to

Table 1: Demographic profile of the study population (n=120)

Variable	n	%
Age (Years)		
25–28	38	31.7
29–32	62	51.7
>32	20	16.6
Total	120	100.0
Gender		
Male	61	50.8
Female	59	49.2
Total	120	100.0
Qualification		
MBBS	36	30
PG (MD/MS)	84	70
Total	120	100.0
Designation		
JR	36	30
SR	84	70
Total	120	100.0
Discipline		
Surgical+Allie	65	54.2
Medicine+Allied	55	45.8
Total	120	100.0
Post MBBS experience (Years)		
<4	51	42.5
>4	69	57.5
Total	120	100.0
Undergone tuberculosis specific training		
Yes	19	15.8
No	101	84.2
Total	120	100.0

information level (palatable/great) than those having MBBS degree. Likewise, it was seen that the information level improved with number of long periods of involvement. This positive relationship of information level with capability and long stretches of involvement was viewed as genuinely huge (Table 2).

With respect to on utility of CBNAAT, larger part unequivocally concur/concur that CBNAAT helps in making conclusive finding of TB ($n=94$, 78.3%) further develops recognition of aspiratory TB ($n=105$, 87.5%), further develops location of extrapulmonary TB ($n=81$, 67.5%), and lessens time to distinguish TB ($n=91$, 75.8%). In any case, a significant number of subjects actually deviate/emphatically cannot help contradicting the job of CBNAAT in conclusion of TB and few have never encountered its utility (Fig. 2).

It was seen that 64.16% ($n=77$) inhabitants were rehearsing CBNAAT testing for TB location, while 28.34% ($n=34$) were not.

Shockingly 38.33% ($n=46$) did not answer when gotten some information about number of tests being sent for CBNAAT testing consistently. Be that as it may, rest was rehearsing normal sending of tests in various frequencies.

As to of test being sent for CBNAAT testing, most regularly sent example was sputum ($n=51$, 42.5%) trailed by discharge ($n=20$, 16.67%) and body liquids ($n=17$, 14.16%). About 44.16% ($n=53$) members did not answer (Table 3).

DISCUSSION

This review was directed among 120 occupant specialists working in a tertiary consideration medical clinic to survey their discernments with respect to utility of CBNAAT testing in determination of pneumonic, extra-pneumonic, and drug safe TB. It was seen in this study that greater part ($n=84$, 70%) were senior occupants having postgraduate certificate. Cooperation from careful and United branches was bit more ($n=65$, 54.2%). About 57.5% ($n=69$) inhabitants were having over 4 years of post MBBS experience yet shockingly just 15.8% ($n=19$) had gone through any TB explicit preparation. One more review from Udupi region of Karnataka state saw that members who knew about the motivations for the specialist and patient and furthermore of the free accessibility of CBNAAT [6].

With respect to levels, 58.4% ($n=70$) inhabitants were having acceptable information level, 35.8% ($n=43$) great though 5.8% ($n=7$) had unfortunate level. Concentrate on results mirrored that postgraduates or senior inhabitants with higher capability and a more prominent number of long stretches of post MBBS experience had fundamentally better information scores. Comparative outcomes were

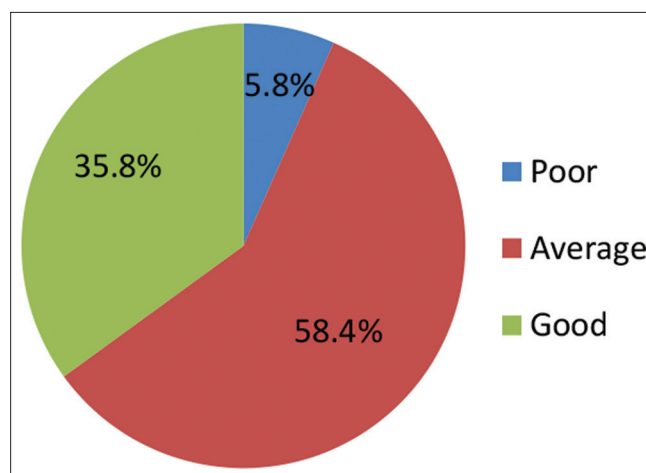


Fig. 1: Knowledge level of the study subjects (n=120)

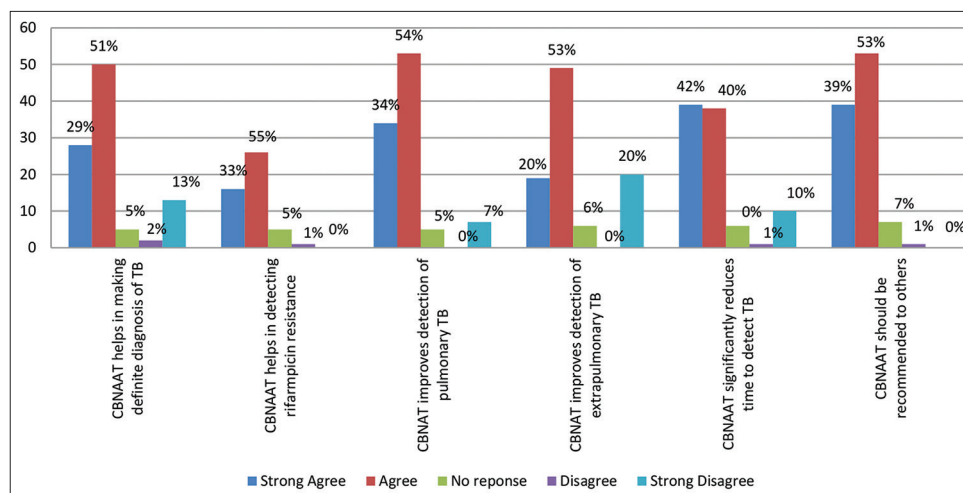


Fig. 2: Attitude regarding utilization of CBNAAT (n=120)

Table 2: Association of knowledge with qualification and experience among study subjects (n=120)

Variable	Knowledge level (%)			Total	p-value
	Poor	Average	Good		
Qualification					
Undergraduates	4 (10.5)	29 (76.3)	5 (13.2)	38 (100)	0.003
Postgraduates	4 (4.9)	41 (50.0)	37 (45.0)	82 (100)	
Total	8 (6.7)	70 (58.3)	42 (35.5)	120 (100)	
Post MBBS Experience (Years)					
Upto 2 years	3 (8.3)	28 (77.8)	5 (13.9)	36 (100)	0.009
2-4 years	0 (0.0)	10 (43.5)	13 (56.5)	23 (100)	
>4 years	5 (8.2)	32 (52.5)	24 (39.3)	61 (100.0)	
Total	8 (6.7)	70 (58.3)	42 (35)	120 (100)	

Table 3: Practices regarding CBNAAT usage (n=120)

Variables	Practices	n (%)
For TB detection are you sending samples for CBNAAT	Yes	77 (64.16)
	No	34 (28.34)
	No response	9 (7.5)
Number of samples being sent for CBNAAT testing every month	<30	65 (54.16)
	>30	9 (7.5)
Samples sent for CBNAAT testing every month*	No response	46 (38.33)
	Sputum	51 (42.5)
	Gastric lavage	8 (6.67)
	Endometrial tissue	8 (6.67)
	Body fluids	17 (14.16)
	Pus	20 (16.67)
	No response	53 (44.16)

*Multiple responses permitted

seen by one more review from Faridabad district [7]. Study saw that main 35.5% inhabitant specialists had great information level, while rest were having normal (58.3%) or poor (6.7%) level of information in regards to CBNAAT utility.

It is seen in this review that occupants had an expansive idea of CBNAAT as a sub-atomic test for recognition of TB and rifampicin obstruction, in any case, lucidity with respect to explicit circumstances where CBNAAT could use was need. Almost 66% occupants knew nothing about the way that contrasted with CBNAAT, AFB microscopy is as yet the suggested technique for determination in an associated case with pneumonic TB according to RNTCP calculation. Discoveries of one more review from south India are additionally in concordance with our observations [8]. Study saw that simply 52% of the clinicians complied with refreshed public (RNTCP) rules. About 72% knew the right meaning of MDR TB. In any case, just 36% of them knew the

symptomatic technique (quality master/CB NAAT) of affirming the MDR TB.

Of course, it was seen that 64.16% (n=77) inhabitants were rehearsing CBNAAT testing for TB recognition, though 28.34% (n=34) were not. One potential justification for this conduct might be absence of mindfulness about accessibility of CBNAAT in the setting and second could be absence of refreshed information with respect to updated rules. In this examination on testing occupant specialists mentality on utility of CBNAAT, we saw that larger part were having uplifting perspective in regards to practically all parts of CBNAAT utility in finding and the executives of TB yet few dissent/unequivocally cannot help contradicting the utility of CBNAAT. Then again, a lot of subjects, deviate/emphatically cannot help contradicting the job of CBNAAT in finding of TB and few have never encountered its utility. Our discoveries affirm the consequences of one more subjective review from Kerala state [9]. Study recognized a "Hole among organizers and implementers" regarding TB control.

As to for CBNAAT utilization, most normally sent example was sputum (n=51, 42.5%) trailed by discharge (n=20, 16.67%) and body liquids (n=17, 14.16%). As the review included inhabitants from all disciplines, namely, psychiatry, ophthalmology, and so on may not need sending tests in routine subsequently occupants from these disciplines either did not answer or said that they are not sending tests for CBNAAT testing. The aftereffect of this study is in concurrence with past examinations by Kasat *et al.* also, Sachdeva and Shrivastava [10,11]. Since over 40% occupants in present concentrate never experienced CBNAAT utility, it is exceptionally put forth for that postgraduate educational program in each discipline should pressure upon TB the executives and control. As occupants/senior occupants are the primary resource between the patients and the medical care conveyance framework, their ability working through in-administration preparation phases now and again is of most extreme significance.

CONCLUSION

Based on above conversation, it very well may be reasoned that practices for CBNAAT utilization stays low as reflected in the current review regardless of having great information scores. This calls attention to toward information practice gap. Measures should be taken with the goal that they set information up as a regular occurrence and fill the current information practice gap.

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AUTHORS' CONTRIBUTION

All the authors have contributed equally.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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