

## Tuberculosis During Covid-19 Pandemic: Challenges and Opportunities

Both novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and *Mycobacterium tuberculosis* involve the lungs and share symptoms like cough, fever, and respiratory difficulty. The transmission for both agents is through aerosol and close contact, although the incubation period for tuberculosis is relatively longer. There is limited experience of COVID-19 infection in tuberculosis (TB) patients, but it is estimated that there may be a catastrophic impact of COVID-19 on TB [1]. This pandemic of COVID-19 has elicited social stigmata and discriminatory behaviour, coupled with pre-existed TB related stigmata [2,3]. Together, it is likely to increase the burden on the family as well as on limited resources in developing countries.

Currently, GeneXpert is the primary diagnostic tool for TB; however, its equipment is shifted and being used for COVID-19 testing, which is seriously jeopardizing the testing capacities for TB [4]. Moreover, the protection of health care staff involved in the TB program is a big concern, as sputum production is considered as an aerosol generating procedure [5]. Further-more, access to health care facilities is also hampered due to lockdown. This may lead to interruption of treatment and increase the possibility of drug resistance TB (DR-TB). All stakeholders should ensure that gene expert machines during the COVID-19 pandemic should be used in such a manner that there should be fractional testing for both COVID-19 and TB. Health care workers (HCW) and other

personnel involved in TB care should be retrained on the importance of universal safety precautions and infection prevention control. The mechanism of the door to door drug delivery needs to be developed and strengthened in such an extent that the treatment of TB will not be hampered. The universal use of masks in COVID-19 will also help in reducing the incidence of TB, and considering the high TB burden in India, this practice should be continued in the post-COVID era too, especially in crowded areas.

We feel that lessons learned from this pandemic can be fruitfully be used for tuberculosis eradication in future.

*Published Online:* September 05, 2020; *PII:* S097475591600241

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## Pediatric Renovascular Hypertension: The Diagnostic Algorithm

Apropos of the recently published review on management of renal artery stenosis in the journal [1]. Diagnostic algorithm in the article shows that diagnosis is to be confirmed by Digital Subtraction Angiogram (DSA) even if findings are suggestive of renal artery stenosis (RAS) on computed tomography angiography (CTA) or magnetic resonance angiography (MRA). In

this context it is prudent to note that MRA is reported to have a sensitivity of 62.5% for RAS detection with 100% specificity [2], whereas sensitivity for CTA is known to be as high as 84.2% [2]. Authors have rightly pointed out radiation risks associated with CTA and DSA. In pediatric diagnostic imaging modalities, efforts are always made to reduce the radiation exposure by using radiation reduction protocols [3,4]. DSA unarguably remains gold standard for accurate diagnosis of RAS with a sensitivity and specificity of almost 100% [2]. However, it is the most invasive of all tests, requires anesthesia and involves radiation exposure. Thus, if CTA or MRA findings are suggestive of RAS then there should not be any need for DSA for diagnosis.

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**AUTHORS' REPLY**

Thank you for your interest in our review article [1]. The different imaging modalities were placed in the review to provide a comparison of the various tests and the associated risks. Although an MRA and CTA have been shown to have high sensitivity and specificity along with high quality images, renal artery stenosis can still be missed, specifically in patients with intra-renal arterial disease. The sensitivity and specificity of MRA is not as good in small children as it is in adults. This is the reason why DSA was selected for pediatric patients with a high pre-test probability of renovascular hypertension and patients with an associated genetic syndrome (see **Web Table 1** [1]). We reiterate that we should suggest DSA to confirm a diagnosis of RAS, given the small vasculature within the pediatric population and its ability to guide potential timely intervention.

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## Vitamin D Deficiency: Definition Matters!

We read the recently published articles on vitamin D deficiency in the journal [1,2], and wish to raise certain related issues. We believe that the true burden of vitamin D deficiency/insufficiency and its associations cannot be estimated unless a standard consensus definition is used. At least, for the studies having important public health implications, the adherence to the "consensus definitions" is desirable, as the prevalence of the problem varies with the definition used. The cut-offs used for defining deficiency/insufficiency by Singh, *et al* [1] are based on a decade-old study. Almost all the current guidelines state that vitamin D3 level <12 ng/ml should be considered deficient, 12-20 ng/mL as insufficient and >20 ng/mL as sufficient [3,4]. The nutrition-based studies have shown that a level of 20 ng/mL would meet the needs of 97.5% of the population [3,4]. Singh, *et al* [1] used a cutoff of 11-32 ng/mL for defining insufficiency, which includes many babies with sufficient levels [1]. Hence, their conclusions should be interpreted carefully. It would have been helpful if the results were shown as odds ratio (Odds of having neonatal sepsis in presence of vitamin D deficiency), and the dose relationship of vitamin D levels with sepsis could be presented. It will help in better risk-stratification and will have therapeutic implications too.

Conversely, the consensus definition of neonatal sepsis is lacking until now and the definitions that are currently used in various studies vary greatly [5]. This extreme degree of variability makes the interpretation difficult. In this study [1], the criteria used for defining various categories of neonatal sepsis are extremely confusing and differ greatly from the somewhat "agreeable definition" of neonatal sepsis. We acknowledge that this variability may be due to the lack of consensus on the best definition of neonatal sepsis.

Vitamin D deficiency is reported to be quite prevalent in India, and there is a recognized need for prophylactic supplementation during infancy. However, as highlighted by a recent survey [6], the practice of prescribing routine vitamin D supplementation varies greatly. Therefore, there is an urgent need for the researchers to use a single, scientific, and consensus-based definition for defining vitamin D deficiency, so that clear evidence-base is provided for guidelines on routine vitamin D supplementation in infancy.

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