

## **Concern over a COVID-19-related BCG shortage**

H. Namkoong,<sup>1</sup> N. Horita,<sup>2</sup> R. Ebina-Shibuya<sup>3</sup>

<sup>1</sup>Laboratory of Clinical Immunology and Microbiology, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, USA; <sup>2</sup>Department of Pulmonology, Yokohama City University School of Medicine, Yokohama, Japan; <sup>3</sup>Laboratory of Molecular Immunology, Immunology Center, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, MD, USA

**Correspondence to:** Ho Namkoong, Laboratory of Clinical Immunology and Microbiology, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, USA. email: [hounamugun@gmail.com](mailto:hounamugun@gmail.com)

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Dear Editor,

Over the past few months there has been a flood of information related to COVID-19,<sup>1</sup> and because of the pandemic threat this can elicit a highly emotional response. An example of this occurred recently with the bacille Calmette-Guérin (BCG) vaccine widely used for childhood immunisation against tuberculosis (TB). Despite its expected specificity for *Mycobacterium tuberculosis*, emerging evidence indicates that BCG also enhances an antiviral immune response.<sup>2</sup> National BCG vaccination policies are reportedly associated with reduced morbidity and mortality for COVID-19,<sup>3</sup> and several groups have started randomised controlled trials (RCTs) to study if BCG could affect COVID-19.<sup>4</sup> However, we should be careful and not interpret the start of trials to be the validation of a potential BCG-based anti-COVID-19 strategy.

The World Health Organization (WHO) strongly recommends global BCG vaccination as it protects children against military TB and tuberculous meningitis,<sup>5</sup> and it aims to assure a

stable vaccine supply globally. The United Nations International Children's Emergency Fund (UNICEF) works towards securing sustainable WHO-prequalified BCG vaccines for children, procuring almost half of the global supply from a limited number of suppliers to achieve vaccine security. However, the WHO recently withdrew a supplier (who was experiencing manufacturing problems), which led to reduced vaccine availability. UNICEF alerted the community that this could cause a 30% reduction in the global BCG vaccine supply with a possible impact on national immunisation programmes.<sup>6</sup> Even a 10% annual supply shortfall is estimated to result in between 5,049–306,911 TB deaths per birth cohort over the first 15 years.<sup>7</sup> It should be noted that a report from South Africa has shown that such a shortage increased tuberculous meningitis cases, emphasising the crucial role of vaccination in controlling TB-related mortality in children.<sup>8</sup>

The prequalified BCG vaccine is undoubtedly the most important factor in preventing TB-related childhood mortality. Unfortunately, reports on the potential BCG efficiency against COVID-19 raise interest in its use against this new condition, although it remains unclear whether BCG administration to adults prevents COVID-19. Furthermore, the long-term safety of this procedure has not been well established. Unnecessary BCG vaccination as a treatment for COVID-19 could lead to a supply shortage for infants, increasing their chances of TB infection and threatening their survival. In this scenario, the COVID-19 “infodemic” risks having a negative, potentially severely damaging impact on child health.

We are facing both a COVID-19 pandemic and an infodemic, and the latter can complicate the search for an effective treatment to defeat this new virus. If the information is amplified, or even modified by news media, the infodemic spreads as fast as the virus itself. We have to learn how to manage the flow of information so we remain open to the opportunities presented by new research (and can rigorously assess these), but do not put at risk established interventions for public health.

*Conflicts of interest:* none declared.

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