Infection and Drug Resistance

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RESPONSE TO LETTER

"Overview of the Main Anti-SARS-CoV-2 Vaccines: Mechanism of Action, Efficacy and Safety" [Response To Letter]

Maria Teresa Mascellino
Federica Di Timoteo
Massimiliano De Angelis
Alessandra Oliva

Department of Public Health and Infectious Diseases, Sapienza University, Rome, Lazio, Italy

Dear editor

We read with interest the comments by Syed Hasan Shuja et al[1] regarding our article on the characteristics of the most common vaccines against COVID-19.[2]

In the present letter the authors underlined that in our review the vaccine by Sinopharm has not been mentioned which could possibly create panic and confusion in those people who were being given this vaccine in their vaccinal programs.[1] We are very sorry for this involuntary misunderstanding. However, we must specify that this review was submitted to the journal at the end of April 2021, the corrected version after the comments of the reviewers was sent in June, the acceptance by the editor occurred in July followed by the publication on August 31, 2021. The authors of the letter are right when they say that the review is incomplete as the role of the vaccine by Sinopharm in the fight against the COVID-19 has not been taken into account.[2] Nevertheless it must be considered that at the time of writing this vaccine was hardly mentioned or not mentioned at all because it was still in the early stages of its evaluation.

The WHO Strategic Advisory Group of Experts (SAGE) issued interim recommendations for the use of the Sinopharm vaccine (BIBP-CoV) developed by Beijing Institute of Biological Products Co. against COVID-19 on 29 April 2021. As new data becomes available, the WHO will update recommendations accordingly.[3]

Because of that, only now we have more precise information about this vaccine (the trade name is Covilo) which shows an efficacy of 79% in preventing symptomatic infection and hospitalization. No important side effects are detected other than pain at the site of injection, headache or fatigue. This vaccine is an inactivated vaccine (Vero cell) whose developers were Sinopharm + China National Biotec Group Co + Wuhan Institute of Biological Products.[4] The vaccine, prepared with the inactivated whole virus, has several advantages, including low manufacturing cost, safety, and does not involve genetic manipulation. This approach uses technology that has been shown to work very well such as for the vaccines against influenza and polio.[4]

The study in Phase 3 (Trials ChiCTR2000034780) projected by Wuhan Institute of Biological Products Co., Ltd and by Beijing Institute of Biological Products Co.,

Correspondence: Maria Teresa Mascellino
Email mariateresa.mascellino@uniroma1.it

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Ltd, evaluated the efficacy, the immunogenicity and the safety of the inactivated SARS-CoV-2 vaccine in a healthy population aged 18 years or older receiving in a random way two doses of the experimental Vero Cell vaccine, or placebo, at time 0 and 21 days after the first administration.[5,6] The vaccine can be stored at 2–8°C but it should be protected from light. As it is well known, SARS-CoV-2 viruses undergo evolution, consequently some new virus variants may be associated with higher transmissibility and disease severity, The efficacy of the COVID-19 vaccine BIBP has not yet been evaluated in the context of widespread circulation of variants of concern (VOC) but this is assumed to be done shortly.[3]

The vaccine booster, after the two doses included in the normal vaccinal program, is currently contemplated for frail subjects with comorbidities, healthy workers, teachers, immunocompromised patients, and others. It is worth noting that at the time of our review, there was still no talk of the booster at all. In the near future the third dose of the vaccine might be extended to the entire population. Administration of a third dose of an inactivated virus vaccine (Vero cell) can boost the immune response and increase the duration of anamnestic responses against SARS-CoV-2.[7] So far the approval by the FDA of the third dose refers only to the Pfizer-BioNTech (Comirnaty®) vaccine anti-COVID-19 to allow for emergency use of a single booster dose to be administered at least six months after completion of the primary series for particular subjects.[8]

Disclosure

The authors declare no conflicts of interest for this communication.

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