

Peer Review

Review of: "Novel Technologies for Intradermal Delivery of Fractional-Dose Inactivated Poliomyelitis Vaccine: A Review of Implementation Research and Implications for Equitable Vaccine Access"

Martina Oneko¹

1. Malaria Branch, Kisumu, Kenya, Kenya Medical Research Institute, Nairobi, Kenya

REVIEW

Novel Technologies for Intradermal Delivery of Fractional-Dose Inactivated Poliomyelitis Vaccine: A Review of Implementation Research and Implications for Equitable Vaccine Access

Garba Bello Bakunawa¹ , Mortada El-Shabrawi² , Rana Muhammad Safdar³ , Asmatullah Arab³ , Catherine Daly⁴ , Paul LaBarre⁴

The manuscript is very well written and highly relevant in the current situation where more vaccines are suggested to be used in campaigns and routine immunization practice.

It needs to be mentioned, though, that the review was initiated by an employee of the manufacturer of TROPIS, and the manuscript shows more studies that evaluated this needle-free injector. I believe that it may be more advanced than other needle-free injectors and, due to the pre-qualification by WHO, it is more accessible for investigators who want to employ intradermal delivery of vaccines.

INTRODUCTION: The introduction is very long but is an excellent review of the current Polio Vaccine situation and is therefore worth reading.

? Add a description of evaluated new technologies either to the methods or to the introduction

METHODS: No comment

RESULTS: The results section is well written and easy to read. The tables have problems described below, and the description in the written text does not fit the table number. This needs to be rectified.

TABLE 1: Table 1 has the same content as Table 3 but a different heading. Table 1 is described as giving a summary of the reviewed publications, so I assume the real Table 1 is missing altogether.

TABLE 2: Table 2 is described as giving a summary of the evaluated devices, but it shows which study evaluates which implementation category. A summary of evaluated devices may be useful here, but then an additional table would be needed to show the content that is currently in Table 2.

TABLE 3 is labelled as 'Summary of the ID delivery attributes', which fits the content. If an additional table is needed, the current Table 2 should become Table 3, and Table 3 should become Table 4.

DISCUSSION:

Overall, the discussion mentions very relevant points, describes the limitations, the costs, and cost reduction in case of the feasibility of fractional dose immunization, and further use cases for this mode of delivery. Below is a small issue I observed regarding the references.

'Tropis needle-free has also been used in preclinical and clinical studies for a wide range of both vaccines and treatments, including rabies,[89] malaria, and immuno-oncology.[90][91][92]' : None of these references talk about a malaria vaccine? As far as I know, the intradermal application method has mainly been used for controlled human malaria infection and was not very successful for the Plasmodium falciparum sporozoite vaccine in early clinical trials. Please add one of the references talking about the intradermal use of malaria vaccines.

Declarations

Potential competing interests: No potential competing interests to declare.