PROSPECTS OF LASSA FEVER CANDIDATE VACCINES

Background

Lassa fever is an acute viral haemorrhagic disease caused by the Lassa virus (LASV). It is endemic in West Africa and infects about 300,000 people each year, leading to approximately 5000 deaths annually. The development of the LASV vaccine has been listed as a priority by the World Health Organization since 2018.

Considering the accelerated development and availability of vaccines against COVID-19, we set out to assess the prospects of LASV vaccines and the progress made so far.

Methods

We reviewed the progress made on twenty-six vaccine candidates listed by Salami et al. (2019) and searched for new vaccine candidates through Google Scholar, PubMed, and DOAJ from June to July 2021.

We searched the articles published in English using keywords that included “vaccine” AND “Lassa fever” OR “Lassa virus” in the title/abstract.

Results

Thirty-four candidate vaccines were identified - 26 already listed in the review by Salami et al. and an additional 8, which were developed over the last seven years.

Thirty (30) vaccines are still in the pre-clinical stage, while 4 of them are currently undergoing clinical trials.

The most promising candidates in 2019 were vesicular stomatitis virus-vectored vaccine and live-attenuated MV/LASV vaccine; both had progressed to clinical trials.

Conclusions and Recommendations

Despite the focus on COVID-19 vaccines since 2020, LASV vaccine is under development and continues to make impressive progress; hence, more emphasis should be put into exploring further clinical studies related to the most promising types of vaccines identified.

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