Potential vaccine to prevent mother-to-child transmission of HIV after birth to start trial

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The Medical Research Council (MRC) together with researchers from Kenya, The Gambia, United States of America, Sweden, and Spain, has opened enrolment in two infant HIV vaccine trials, known collectively as PedVacc. These trials are examining the safety of a new type of HIV vaccine, MVA.HIVA, in infants.

The vaccine is called MVA.HIVA and was developed at the University of Oxford in England. The vaccine carrier called modified vaccine virus Ankara (MVA) is a weakened virus previously used as a smallpox vaccine. Small pieces of HIV genes have been added to this, but the vaccine does not contain the whole HIV virus, and cannot cause HIV infection or AIDS. MVA.HIVA is one component of a more complex future vaccine.

The MVA.HIVA vaccine has been previously tested in 13 studies in the UK and Africa, involving a total of 375 adult volunteers. There have been no serious reactions related to this vaccine. It is safe and well tolerated. Furthermore, the MVA component was administered to more than 120,000 vaccinees as part of the smallpox eradication programme, with no reported reactions, despite the deliberate vaccination of high-risk groups. More recently, a similar MVA-based vaccine for tuberculosis has been shown to be safe in infants in The Gambia.

The PedVacc studies are sponsored by the MRC and funded by the European and Developing Countries Clinical Trials Partnership (EDCTP). The trials are taking place in The Gambia and Kenya and will

recruit in total 120 healthy, HIV-negative infants born to healthy, either HIV-positive or HIV-negative mothers. Both trials will entail a single injection into the muscle of infants aged 20 weeks.

Any HIV-positive women in this study will be provided with antiretroviral drugs and extensive feeding counselling during pregnancy and while breastfeeding to reduce the risk of HIV transmission to their infants. Half of the infants in the study will be randomised to receive the MVA.HIVA study vaccine in addition to their regular childhood immunisations. The other half will only receive their regular immunisations, but not the study vaccine, and they will be compared to the vaccinated infants.

Importantly, parents must give consent for their child to participate in the study. The study has been reviewed and approved by local and international ethics and regulatory bodies.

Provided by Medical Research Council