Technical Note
MenAfriVac™ vaccine campaigns in the African meningitis belt
Use of vaccine in pregnant and lactating women
22 November 2010

Purpose

To assess the safety of immunizing pregnant and lactating women during nationwide vaccination campaigns using the new meningococcal A conjugate vaccine, MenAfriVac™.

Background

Product label (package insert): The pregnancy section of the prescribing information for the licensed vaccine carries a caution statement: PREGNANCY AND LACTATION. Adequate human data on use during pregnancy or lactation, and adequate animal reproduction studies are not available. Meningococcal A conjugate vaccine is not recommended in pregnancy unless there is defined risk of group A meningococcal disease. Lactating women also should not be given the vaccine since it is not known whether the vaccine is excreted in human milk.

This manufacturer information is similar to that found on other meningococcal conjugate vaccines product information packages which also list these two conditions as contraindications or as precautions.¹ If pregnant and lactating women are excluded from the planned mass campaigns in endemic areas, to vaccinate all those aged 1-29 years, between a quarter and a third of those at risk of meningitis infection in this age group will be left unvaccinated. The manufacturer did not conduct clinical studies specifically to evaluate the vaccine in pregnant women prior to licensure and the warning in the package insert is a standard precautionary statement, as applied to many other vaccine products.²

As is discussed below, there are grounds for believing that the vaccine can be safely administered to pregnant and lactating women and that the vaccine is not contraindicated for use in pregnancy. The real risk of meningitis for women living in endemic areas has to be weighed against the hypothetic risk of vaccinating pregnant and lactating mothers.

Evidence summary

MenAfriVac™

Non-clinical studies
Pre-clinical developmental toxicity studies have been performed prior to licensure on early clinical formulations as well as on the commercial formulation of the vaccine. Pregnancy and lactation animal reproduction and perinatal studies have not demonstrated a risk with respect to effects on pregnancy and embryo-fetal development, parturition and post-natal development, including among lactating dams and their sucklings.³
Clinical studies
MenAfriVac™ (PsA-TT) was not administered to pregnant women, an exclusion criterion in all clinical studies. However in completed studies, 14 women are known to have become pregnant shortly after administration (PsA-TT-003 study in 2-29 year-olds). The 14 pregnancies were reported 5 to 12 months after vaccination among subjects in the age group 18-29 years except for one in the age group 11-17 years. All 14 pregnancies were followed until delivery 10 to 19 months after vaccination. Except for a case of a stillborn with no congenital anomaly or birth defect, delivered 13 month after vaccination to a 26 year-old woman who had obstructed labour with a previous history of still births, all deliveries were live born children with no congenital anomaly or birth defect.6

Other bacterial vaccines
Studies of vaccination with meningococcal polysaccharide vaccines during pregnancy have not documented adverse effects among either pregnant women or newborns. On the basis of these data, pregnancy has not been judged a contraindication to use of these vaccines in the United States.7 Similarly, no evidence exists of risk after vaccinating pregnant women with bacterial vaccines or toxoids. In addition, there is no evidence that bacterial vaccines or toxoids given to lactating women can harm a developing child and lactating is not considered as a contraindication for the administration of this type of vaccines.8 In an authoritative text on vaccines it is stated that meningococcal conjugate and meningococcal polysaccharide vaccines can be safely used for women at increased risk from these types of bacterial infections.9 Published guidelines indicate that pregnant women who are exposed to certain vaccine-preventable diseases should receive appropriate vaccines, when the risk of serious disease outweighs the theoretical risk of adverse effects on the mother or fetus. These vaccines include hepatitis B vaccine, polyvalent meningococcal conjugate and polysaccharide vaccines and parenteral typhoid vaccine.10 Studies of vaccination with Hib conjugate vaccine (PRP-T) during pregnancy have not documented adverse effects among either pregnant women or newborns in Africa.11 Lastly, the risk of developing meningococcal disease in the African meningitis belt is substantial.

Global Advisory Committee on Vaccine Safety (GACVS) recommendation
The GACVS reviewed pre-clinical and clinical data at their biannual meeting on December 2009 (first review) and on June 2010 (second review), and concluded:12,13,14 (1) available data do not indicate any special cause for concern with respect to the safety of the vaccine among those to whom it has been administered in clinical studies; (2) postmarketing surveillance is needed to assess the safety profile of the vaccine, including targeted studies to assess vaccine safety in pregnancy and where possible a continuation of the phased roll-out of the vaccine so that additional safety data may be accumulated through careful postmarketing surveillance.
Postmarketing surveillance protocol

Ministries of Health in the first three countries to introduce MenAfriVac™ have developed a common pharmacovigilance protocol for the detection, assessment, handling and reporting of Adverse Events Following Immunization (AEFIs), during the mass vaccination campaigns to take place in 2010-2011 in Burkina Faso, Mali and Niger. The protocol comprises a section for monitoring of pregnant women. Pregnant women who receive the vaccine will be followed. An identification sheet for these women will be completed and a register will be used to monitor these pregnant women and their infants at birth.15

Statement

The target population for this vaccine is all aged 1-29 years in areas at high risk of infection with meningococcus A. This population includes substantial numbers of women of childbearing age. Because of the risk and severity of meningococcal group A disease, vaccinating pregnant and lactating women is an important priority.

The WHO recommends that pregnant and lactating women residing in the meningitis belt receive the MenA conjugate vaccine during any stage of pregnancy or lactation. This recommendation is based on the increased risks of meningococcal disease and its complications for pregnant women residing in the meningitis belt, the protection that the MenA conjugate vaccine can provide for both pregnant and lactating women, and the track record of safety of the licensed bacterial vaccines in pregnant and lactating women.

WHO and partners are advising government health authorities in countries of the meningitis belt on the implementation of pharmacovigilance activities during and after the MenAfriVac™ vaccination campaigns in all populations, including pregnant and lactating women. As part of these activities, it is advised that communication materials be developed and that pregnancy exposure registries be implemented as a phase 4 commitment to collect health information from women who are given the vaccine when they are pregnant. No such registries will be needed for lactating women as the risk is thought to be biologically very unlikely. In addition, registries could be developed at prenatal clinics to collect health information about women and their newborns at time of delivery and to link this information to the mothers vaccination status.

---

1 The electronic Medicines Compendium (eMC). Datafarm 2010, United Kingdom: http://www.medicines.org.uk/emc/.


3 Data on file at Serum Institute of India Limited.


