INFORMATION PAPER:
When Pregnancy Is Discovered After Anthrax Vaccination

1. Purpose. This paper provides information for women who discover they are pregnant after receiving BioThrax® (anthrax) vaccination.

2. Current Recommendations on Vaccination and Pregnancy

DoD policy exempts pregnant military women from receiving the anthrax vaccine until after the conclusion of pregnancy. However, as it can be difficult to predict conception or diagnose early pregnancy, some women may inadvertently receive anthrax vaccine before pregnancy is recognized.

3. Receipt of the Vaccine during Pregnancy

In a study published in 2008 of more than 115,000 infants born to military women (1998-2004), of whom 3000 were born to women who were inadvertently vaccinated against anthrax in early pregnancy, birth defects were slightly more prevalent among first trimester-exposed infants, but the association was neither strong nor consistently statistically significant. Despite using an extensive database, the study had several limitations including the inability to control for several well-recognized environmental factors that can impact the development of birth defects such as the use of tobacco and alcohol during pregnancy.

After reviewing data from previous studies, and a review of the above referenced study and discussions with the study authors, the Advisory Committee on Immunization Practices (ACIP) concluded that the anthrax vaccine is safe to administer during pregnancy but recommended that pregnant women postpone vaccination unless exposure to anthrax poses an immediate risk for disease.

The conclusions of the ACIP are supported by a more recent study published in 2015 that compared women in the National Smallpox Vaccine in Pregnancy Registry (NSVIPR) who also received anthrax vaccine in pregnancy to those who did not. Rates of adverse pregnancy and infant health outcomes (including birth defects) among the anthrax vaccine-exposed group were similar to or lower than expected when compared with published reference rates and the anthrax vaccine-unexposed population.

As mentioned previously, the 2008 publication had a number of limitations that resulted in inconsistent findings. To remedy these shortcomings, a follow-up study was performed that used data from more recent years (2003-2010), updated and validated algorithms for case definitions, and additional data on other potential risk factors. The findings, published in 2017, did not find any strong associations between inadvertent anthrax vaccination at any time during pregnancy and birth defects risk.

4. Changes in Vaccine Dose and Route and Surveillance Requirements

In December 2008, Emergent BioSolutions received FDA approval to supplement the biologics license for BioThrax® to reflect a change in the vaccination schedule and route of administration. Current immunization with BioThrax® consists of a series of five 0.5 mL intramuscular doses administered at 0 and 4 weeks, and 6, 12 and 18 months. Yearly booster injections of 0.5 mL intramuscularly are recommended for those who remain at risk. Previously the vaccine was given as a subcutaneous injection with an additional dose at 2 weeks, and yearly boosters as described for the current schedule. At the time of the 2008 FDA approval, it was determined that BioThrax® would remain at Pregnancy Category “D”. As acknowledged in the approval, Emergent BioSolutions committed to the development of a Pregnancy Exposure Registry for BioThrax® to prospectively collect data on spontaneously-reported exposures to BioThrax® during pregnancy with the intent to address elements found in the FDA Guidance for pregnancy registries.

5. BioThrax® Anthrax Vaccine in Pregnancy Registry

The Department of Defense, with funding from the vaccine manufacturer, Emergent BioSolutions, has developed the BioThrax® (Anthrax) Vaccine in Pregnancy Registry (BAVPR) to track pregnancies
inadvertently exposed to anthrax vaccine. The purpose of the BAVPR is to assess and estimate the rate of serious adverse maternal and pregnancy outcomes among women exposed to BioThrax® during pregnancy, and infant health outcomes among infants born to these women. Active duty military women who receive the anthrax vaccine while pregnant are eligible to join the BAVPR.

6. Resources for Additional Information

The BAVPR was established to collect important confidential information from women who received anthrax vaccine in pregnancy. Professionals from the BAVPR can answer many questions from participants and their healthcare providers. The BAVPR may be contacted at:

BioThrax® (Anthrax) Vaccine in Pregnancy Registry
c/o DoD Birth and Infant Health Research Team,
Naval Health Research Center, MPH Directorate, 140 Sylvester Rd., San Diego, CA 92106
Phone: 619-553-9255 (DSN 553-9255)
Fax: 619-767-4806 (DSN 767-4806)
Email: NHRC-VaccineRegistry@mail.mil

Additional resources include:

Defense Health Agency- Immunization Healthcare Branch:
Immunization Healthcare Support Center (24 hours a day, 7 days a week)
Phone: I-877-GETVACC (438-8222) or 761-4245 (DSN) [Press option 1]

References


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