LETTER TO THE EDITOR

Chickenpox infection in a three months old infant exposed in utero to Adalimumab

Dear Sir,

Observational data suggest that anti-tumor necrosis factor (TNF)-α antibodies such as Adalimumab (ADA) is safe in pregnancy and that there is no increase in adverse birth outcomes.1 It is believed that ADA efficiently crosses the placenta in the third trimester.1 Live virus vaccines are contraindicated in infants exposed to anti-TNF-α antibodies up to the age of one year, due to the risk of severe complications.1,2 However, environmental exposure of the infant to viruses cannot be eliminated. We present a case of an infant born preterm, exposed in uteri to ADA, who at the age of three months developed a chickenpox infection.

A 37 year old woman with a 17-year history of Crohn’s disease (CD) localized to the terminal ileum and the colon conceived by in vitro fertilization. She was on ADA 40 mg subcutaneously (SC) every second week. Relapse in CD occurred in 11th gestational week. Remission was induced by increasing ADA treatment to 40 mg SC once weekly. ADA treatment was discontinued at 34th gestational week. Two days after, the woman spontaneously went into labor. An acute cesarean section was performed at 35th gestational week. The preterm boy was normal for gestational age and without congenital abnormalities. No complications occurred during the neonatal period.

At the age of three months the child developed a chickenpox rash, and systemic symptoms with fever and malaise (Fig. 1). The child recovered fully with no complications. No obvious exposition was identified.

The child is now 16 months old with normal growth and development. The child has received all vaccinations according to the Danish immunization program. The first live vaccine for measles, mumps and rubella was given at the age of 15 months without complications.

Maternal–fetal transfer of anti-TNF-α antibodies may mean exposure of the infant in the first months after birth, raising potential concerns about infections and response to vaccines.1 This has also been demonstrated by a fatal case of disseminated BCG infection after BCG vaccination in an infant born to a mother treated with Infliximab, another anti-TNF-α antibody, throughout pregnancy.3

Chickenpox, a highly contagious viral infection, is caused by Varicella Zoster Virus (VZV).4

Chickenpox is usually a benign disease in children. However, children who are immunocompromised are in increased risk of serious complications such as Varicella pneumonia and encephalitis.5 The live Varicella vaccine can be given to patients known to be sero-negative for VZV, but pregnancy and ongoing treatment with anti-TNF-α antibodies are contraindications. It is reassuring that in a possible immunocompromised 3 months old infant a chickenpox infection had a benign outcome. This case highlights the need for further studies on maternal–fetal transfer of ADA, fetal drug elimination and potential adverse effects of ADA in the newborn.

Conflict of interest

The authors declare no conflicts of interest.

Figure 1 Chickenpox rash in a 3-month-old child.
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References


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