Impact of Anti-Tumor Necrosis Factor Alpha Antibodies Administered to Pregnant Women With Inflammatory Bowel Disease on Long-term Outcome of Exposed Children.

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Abstract

BACKGROUND: Prenatal exposure to anti-tumor necrosis factor α (TNF-α) antibodies seems to be safe for fetal development. Data on long-term outcome of exposed children are missing. Our aim was to assess long-term postnatal development of children exposed to anti-TNF-α during pregnancy.

METHODS: Consecutive children aged ≥ 12 months exposed to anti-TNFs prenatally for maternal inflammatory bowel disease in 3 centers in the Czech Republic were enrolled. Data on psychomotor development, infections, antibiotics, vaccination, and allergy were retrospectively obtained from mothers, treating pediatricians, and children's vaccination cards. Furthermore, standardized laboratory tests on humoral and cellular immunity were performed.

RESULTS: Twenty-five children exposed to biologicals were included (median age, 34 mo; range, 14–70 mo). All children had normal growth, and all but 1 had normal psychomotor development. Majority (80%) experienced at least 1 infection (mainly respiratory), and 60% of infants received antibiotics, 32% of those within the first year of life. Vaccination was undertaken according to vaccination protocol to 23 infants (92%). Fifteen children also had tuberculosis vaccination without serious complication. Immunological investigation was performed with 17 children (68%). Cellular immunity was normal in all infants, and 7 children had mild
decrease in IgA and/or IgG immunoglobulins without clinical significance. All children had a detectable serologic response to vaccination.

**CONCLUSIONS:** Exposure to anti-TNF-α antibodies seems to be safe for growth and psychomotor development of children, although clinical significance of relatively high frequency of infections and antibiotic use among infants remains questionable because of the lack of a control group. Continuous follow-up of exposed children is absolutely warranted.


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