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Titel des Beitrags:
Maternal type 1 diabetes reduces the risk of islet autoantibodies: relationships with birthweight and maternal HbA(1c).

Abstract:
AIMS/HYPOTHESIS: The risk of type 1 diabetes is reduced in the children of mothers with type 1 diabetes compared with children of fathers with type 1 diabetes. We asked whether children of mothers with type 1 diabetes also have a decreased risk of developing islet autoantibodies, and which factors associated with maternal diabetes contribute to a reduced islet autoantibody risk in offspring.

METHODS: Singleton offspring of a mother (n = 1,008) or father with type 1 diabetes (n = 578) from the BABYDIAB study were included. Children were followed from birth for the development of islet autoantibodies defined as two or more autoantibodies to insulin, glutamic acid decarboxylase or insulinoma antigen 2 in two or more blood samples.

RESULTS: Islet autoantibody risk was lower in children of mothers with type 1 diabetes (5 year risk, 3.2% vs 5.7% in children of fathers with type 1 diabetes; p = 0.04). Among factors that differed between pregnancies from mothers with and without type 1 diabetes, birthweight was associated with islet autoantibody risk. Risk was reduced in children with birthweights in the lower (adjusted HR 0.33; 95% CI 0.14-0.75; p = 0.009) and upper (HR 0.45; 95% CI 0.21-0.97; p = 0.04) tertiles compared with the middle tertile. A sub-analysis of maternal HbA(1c) suggested that moderately elevated third trimester maternal HbA(1c) was also associated with a reduced islet autoantibody risk in
children of mothers with type 1 diabetes (5.7-7%; HR 0.38; 95% CI 0.15-0.96; \( p = 0.04 \) vs children of mothers with HbA(1c)< 5.7%). CONCLUSIONS/INTERPRETATION: The risk of islet autoimmunity is modified by maternally influenced events such as birthweight.