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AUTOIMMUNITY IN CONGENITAL HYPOTHYROIDISM DETECTED BY NEONATAL SCREENING.

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For understanding the relationship between autoimmunity and congenital hypothyroidism (CH), the autoimmue antibodies (Abs) in the maternal and neonatal serum from the CH cases detected by neonatal screening were studied. From 1986.1.1 to 1987.12.31, 95,798 neonates from all over Taiwan were screened for CH by TSH enzymeimmunoassay using dried blood spot samples. Among the 48 cases confirmed by serum TSH and T₄, 41 cases were scanned with ^{99m}Tc (6 athyroid, 2 hypoplasia, 10 ectopic thyroid, 14 enlarged thyroid, 9 normal). Autoimmune Abs (ATA, AMiA, TBII) in maternal and/or neonatal sera from these 41 cases were studied. ATA and AMiA were determined in 36 cases and 9 of them were found to be positive at least one of the Abs (2/4 in athyroid, 0/10 in Hypoplasia and ectopic thyroid, 6/14 in enlarged thyroid, 1/8 in normal). But no positive TBII result was found from 33 cases studied. (However, a positive TBII result was found in a case with transient neonatal hyperthyrotropinemia). The data showed that autoimmunity may play an important role in the CH cases detected by neonatal screening. The positive Abs cases with normal or enlarged thyroid scanning results indicate the possibility of transient CH, which should be further investigated at later age of these patients. Although the titers of the antibody were low (AMiA:1/100, ATA:-) in the two positive athyroid cases, the pathophysiological role of the autoimmunity in agenesis of the thyroid may be very important and remains to be elucidated.