



Neonatal Endocrinological Problems In Collodion Babies

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Background:

Collodion babies (CBs) are an inherited group of diseases characterized clinically by diffuses severely dry and scaling skin. Patients are generally born prematurely and/or small for gestational age (SGA). Congenital hypothyroidism is seen together with various congenital anomalies, although the mechanism involved is still unclear.

Objective and hypotheses:

To identify endocrinological problems, and particularly those concerning growth, in 42 CBs.

Method:

Clinically identified newborn CBs were included in the study group (Group 1). Since CBs are generally premature and/or born SGA, control group matched to the patients in the study group in terms of gestational age (± 7 days) and birth weight ($100\text{gr} \pm$)(Group 2) was established. Blood specimens were collected between the 3rd and 7th days of life from both groups for thyroid function tests [thyroid-stimulating hormone (TSH), triiodothyronine (T3), thyroxine (T4) and thyroglobulin (TG)] and to measure serum GH, IGF-I and IGFBP-3 levels.

Results:

Group 1 consisted of 42 CBs (25 males and 17 females) with gestational ages between 32 and 42 weeks and birth weights between 1,400 and 4,000 gr. Twelve patients were assessed as premature and 17 as SGA. Serum IGF-I and IGFBP-3 levels were lower and serum GH levels higher compared to the controls. Primary hypothyroidism was diagnosed in 10 patients in the study group, subclinical hypothyroidism in two and central hypothyroidism in one. A statistically significant difference was determined between the groups in terms of primary hypothyroidism ($p=0.01$). Serum GH levels were weakly negatively correlated with birth weight ($r = -0.32$, $p=0.04$) and serum IGF-I ($r = -0.38$, $p=0.001$) and IGFBP-3 ($r = -0.36$, $p=0.002$) levels.

Conclusion:

Premature birth and SGA are more common in CBs. High GH and low IGF-I and IGFBP-3 levels in cases indicate malnutrition-like GH resistance. In addition, the greater prevalence of hypothyroidism in babies is noteworthy.