

Serum lipid and protein profiles in eutrophic or hypotrophic newborn at term and in their mothers.

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This study was conducted in the Tlemcen region (Algeria) on 38 hypotrophic newborn (2290 ± 30 g), 20 eutrophic newborn (3570 ± 93 g) and their mothers. The effects of hypotrophy on serum lipid and protein amounts were studied in the newborn. The same investigation was carried out in mothers at delivery. Blood samples were taken from the umbilical vein immediately after delivery and cutting the umbilical cord. Blood was obtained from the mothers just after placental expulsion by venous puncture of the elbow pleat.

Cause analysis showed that primiparity, malnutrition in the mother and pregnancy were independent factors responsible for the increased hypotrophic risk in the Tlemcen population. In mothers of hypotrophic newborn compared with those of eutrophic newborn, lower levels of total

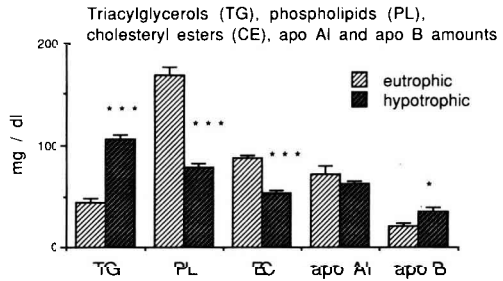


Fig 1. Each value represents mean \pm SEM. Comparison of eutrophics ($n = 20$) versus hypotrophics ($n = 38$) was performed using Student's test; * $P < 0.01$; ** $P < 0.001$; *** $P < 0.0001$.

lipids, triacylglycerol, phospholipid, total protein and total globulin were observed as well as an increase in γ globulins.

In hypotrophic compared with eutrophic newborn a significant increase in triacylglycerol, apo-B and VLDL levels was noted. On the other hand, hypotrophy induced a decrease in cholesterol ester, phospholipid, protein, apo A1 amounts, relative values of HDL and LDL and the albumin/globulin ratio.

In conclusion, hypotrophy involved lipid and protein profiles similar to those of marasmic children. The hypotrophic newborn at term should be considered as a previously marasmic child.