

AXILLARY TEMPERATURE RELATION TO BLOOD SERUM INSULIN-LIKE GROWTH FACTOR-I IN THE NOT-LIFE-THREATENED NEWBORN: RELEVANCE OF PRETERM BIRTH

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Introduction.

Preterm delivery may comport blood serum Insulin-like Growth Factor-I(IG1) decrements and lower body temperature during the first days of postnatal life of the human newborn (NWB).

We evaluated the role of preterm delivery in associations between axillary temperature(TEMP) and IG1 in NWBs without life-threatening disease.

Methods.

NWBs with any among total parenteral nutrition, blood transfusion, therapeutic hypothermia, life-threatening disease, diabetes mellitus(DM), endocrine diagnosis out of DM, malformation, and mother with DM were excluded.

Each of 78 included NWBs had complete data availability for 1) same-day records at one of the first 5 postnatal days(x), 5 days after x(y) and 10 days after x(z) of postnatal age(PNA; unit:day), TEMP(unit:°C), caloric intake (kcal/kg/24hrs or kcal/kg/postnatal life hrs for PNA<1 day; K), and IG1 RIA measurements(unit:uM/dl), and for 2) gender(SEX), birth gestational age(GA; unit:complete week; range=28–42), preterm birth defined as GA<=36(PTB), BW(unit:g; range=1200–4150), BW<=10.th centile for GA(SGA)(numerosity; male SEX, 43; PTB, 46; SGA, 20).

An arithmetical mean was calculated over x-y-z((x+y+z)/3), for TEMP(TEMPM), IG1(IG1M) and K(KM).

The normal score of IG1M according to van der Waerden(IG1M-NS) resulted near-normally distributed.

Mann-Whitney Test, Spearman Correlation and Multiple Linear Regression(MLR) were used for analyses(MLR computations; male SEX, PTB, SGA; condition absent=0, condition present=1).

Results.

TEMPM ranged between 36.07°C and 37.00°C.

Mann-Whitney Test showed significantly higher values of TEMPM in NWBs without PTB(TM-NWBs) than in NWBs with PTB(PT-NWBs)(p=.01), but similar values between TM-NWBs and PT-NWBs for PNA at x(PNAX).

Spearman Correlation; GA vs. TEMPM, rho= .295, p=.009.

MLR partial correlation of TEMPM with outcome IG1M-NS(pc) was significant in a MLR model bearing SEX+SGA+PNAX+KM+TEMPM as predictors(pc coefficient=.269, t=2.373, p=.020), but was not significant in a MLR model bearing SEX+SGA+PTB+PNAX+KM+TEMPM as predictors. R² of each considered MLR model was significant.

Conclusions.

PTB could be involved in TEMPM-IG1M associations not explained by SEX, SGA, PNAX and KM in NWBs free of life-threatening disease.

