

EpiPEG-PreMeb study: chemerina plasmatic and metabolic syndrome relation at SGA childrens

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STUDY

In a cohort of 27 subjects sub (13 boys and 14 girls) from the epiPEG-PreMeb study, a blood sample at 3, 12 and 24 months of life it was extracted. Biochemical parameters s and measured by automated and chemistry levels by ELISA kit (Chemerin human ELISA, Biovondor). The PEG condition was established when the subjects presented a weight or length of at least 2 standard deviations (SD) below, taking as reference the Spanish growth curves (Carrascosa et al., 2010). For strat i fying kind of catch-up, the evolution of weight gain / height for the measurement s was compared: catch-up len t o $\Delta < 0.49$ DE, normal $\Delta 0.5-1$ DE and fast $\Delta > 1$ DE. Statistical analysis included the Pearson correlation coefficient or Spearman 's rho, and the distribution of the data was determined by the test of S hapiro - Wilk (SPSS Statistics v24).

OBJETIVE

The objective of this study has been the analysis of plasma chemistry in a group of children born SGA at the University Hospital of Álava- Txagorritxu and biochemical parameters related to the metabolic syndrome

MATERIAL & METHODS



- SGA newborns
- From 2013 to 2015



Blood exam – 3 m., 12 m. & 24 m.



On going at hospital 24 m



Type of catch-up about weight/tall (Δ):

- Catch-up slow: $\Delta < 0,49$ DE
- catch-up normal: $\Delta 0,5-1$ DE
- catch-up quick: $\Delta > 1$ DE



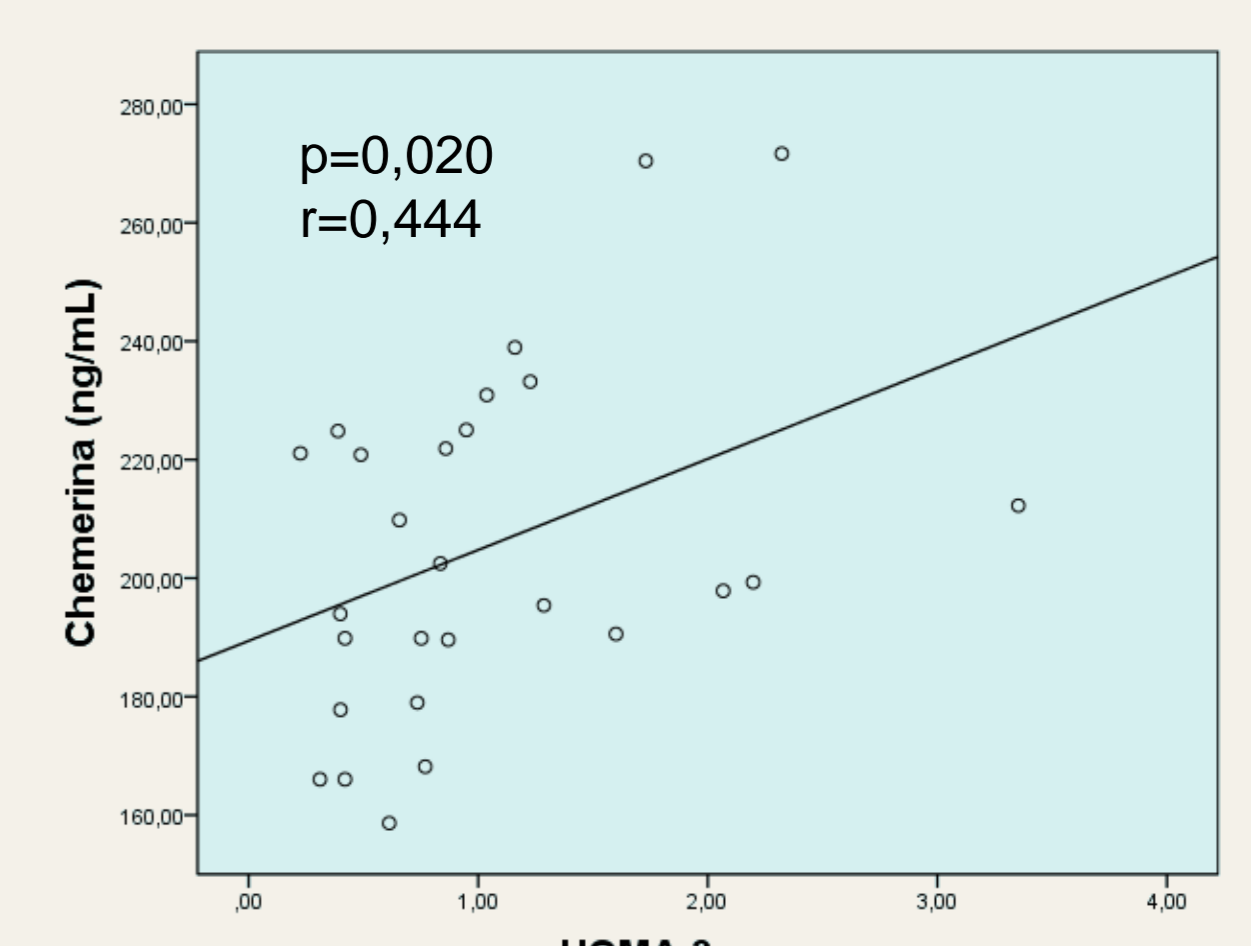
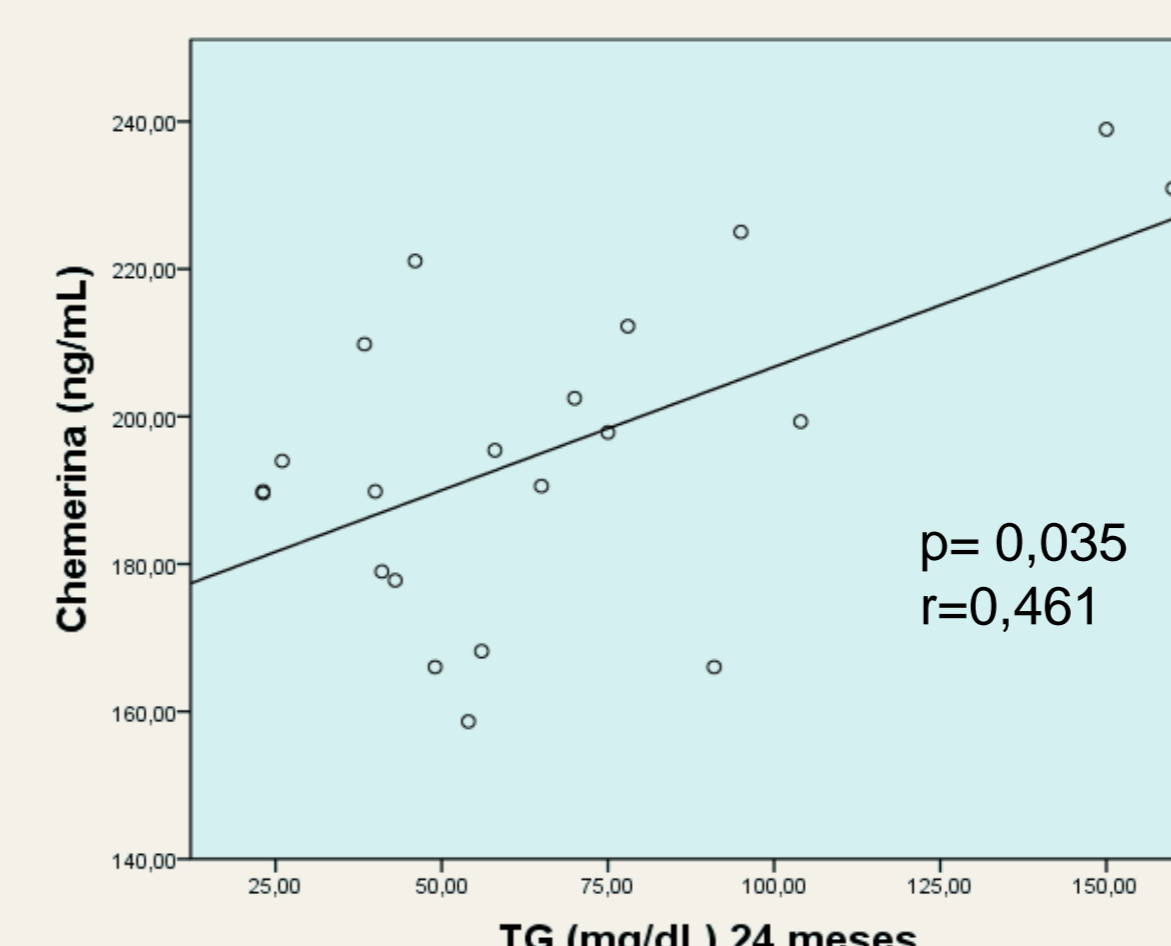
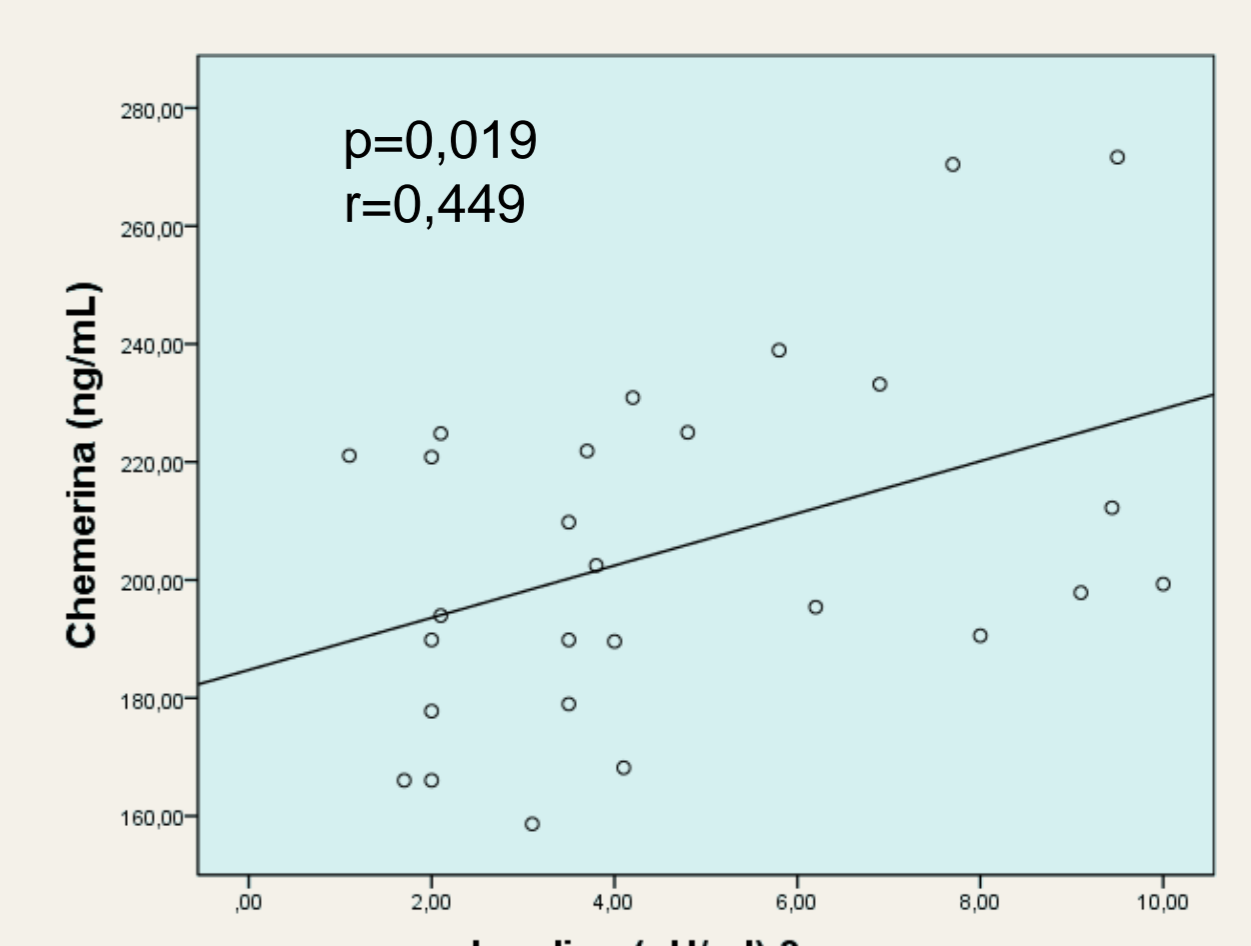
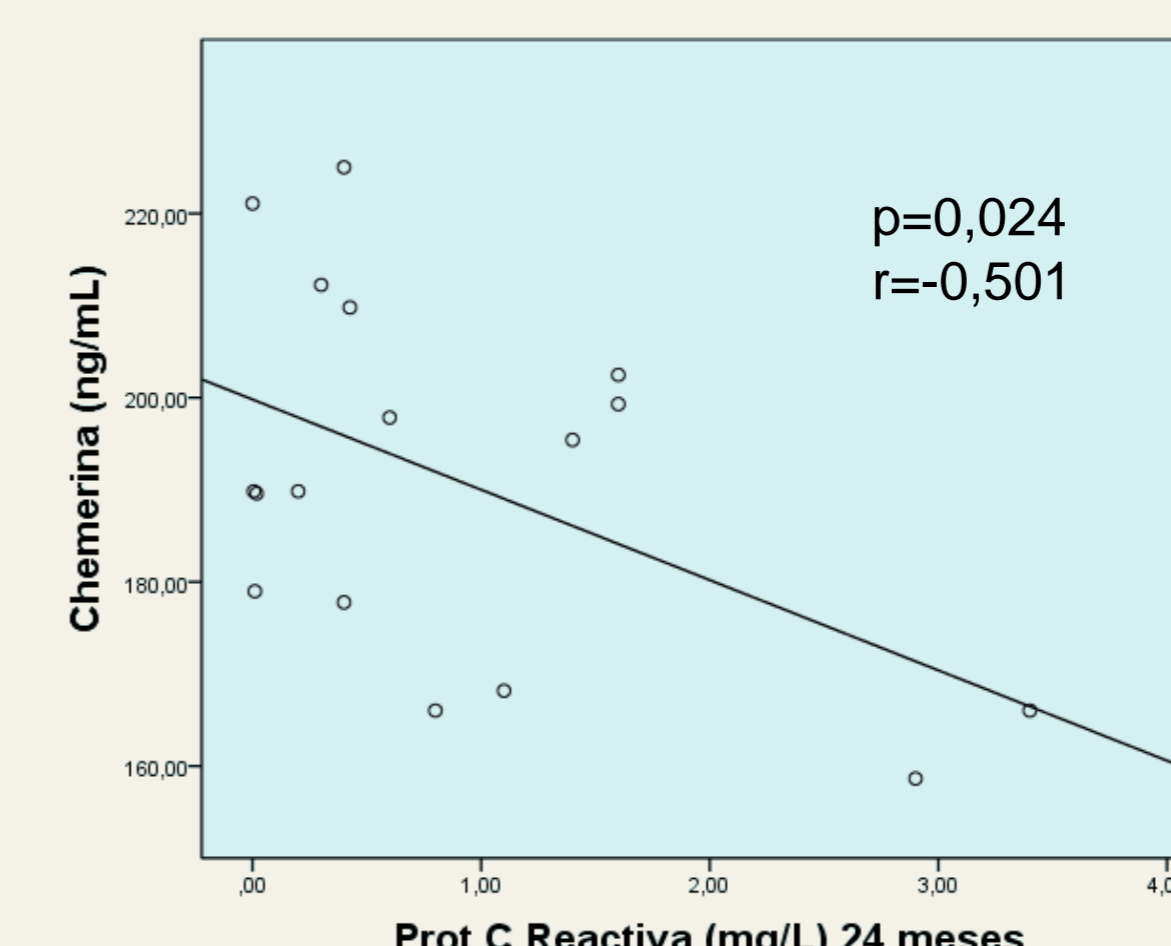
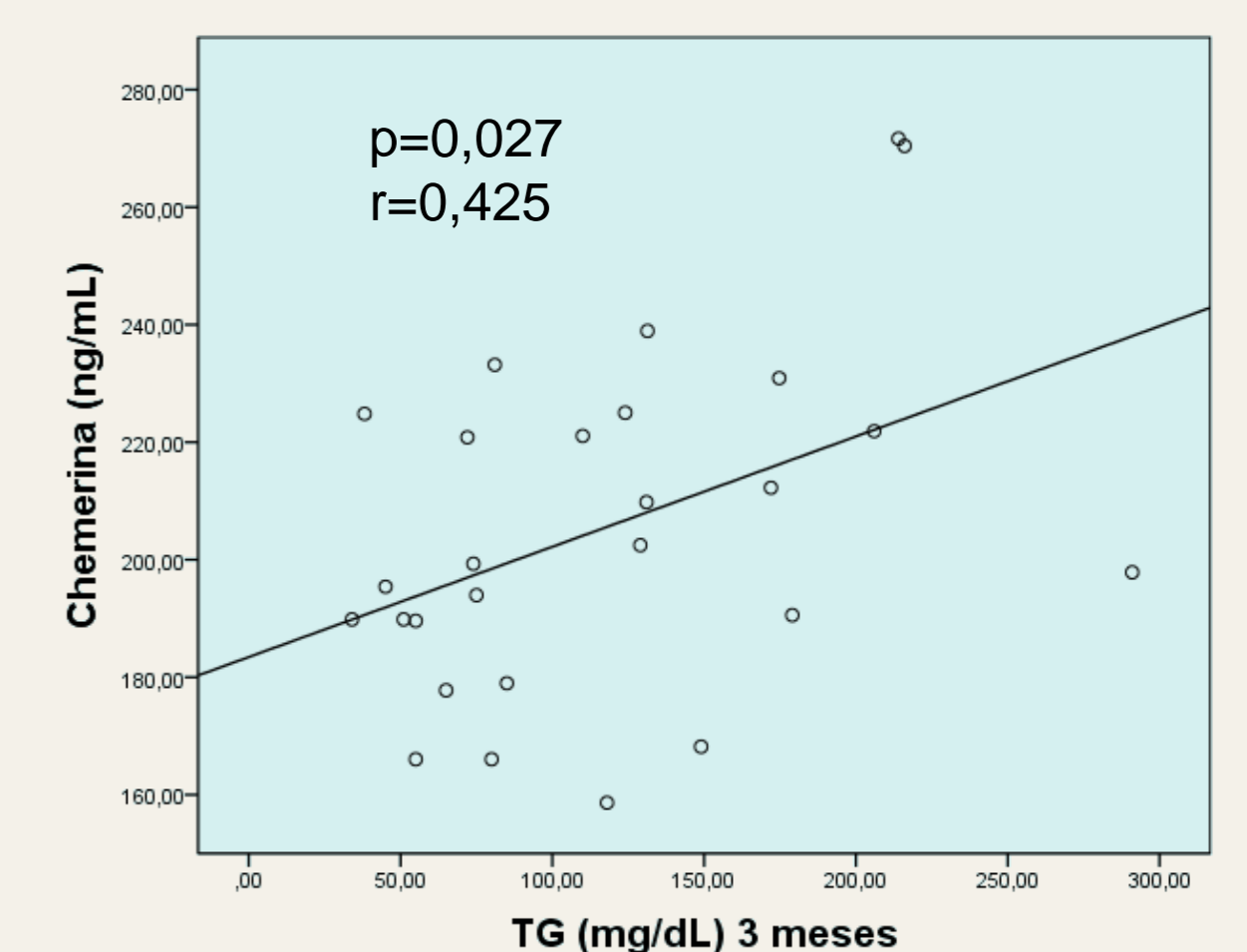
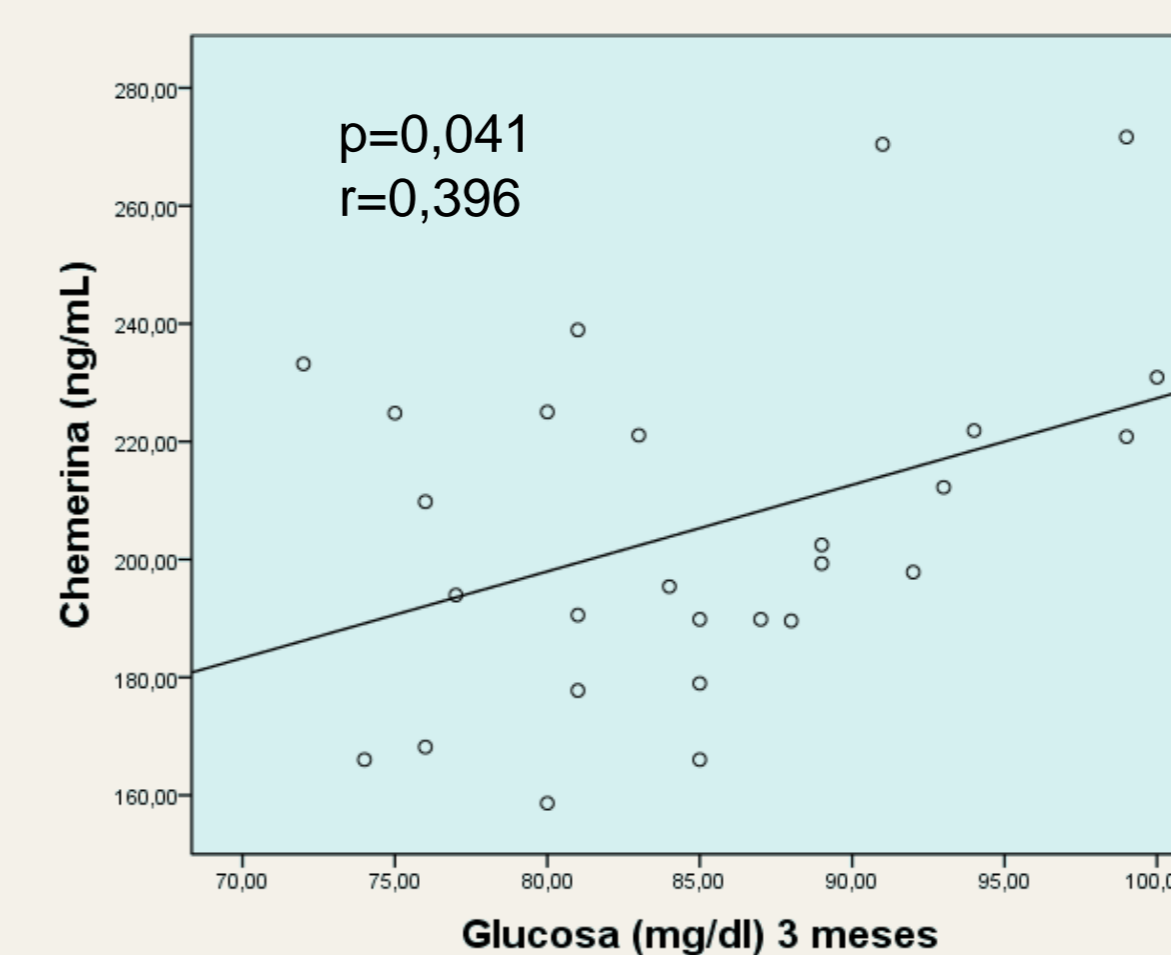
chemerin plasmatic ELISA



Datas study

RESULTS

Bioquimical datas 3, 12 y 24 and chemerin at 3 m. all patients (n=27) about sex and catch up



Estratification	Data	p	r
Boys	TG (24 meses)	0,046	0,610
	PCR (24 meses)	0,011	0,761
Girls	TG (3 meses)	0,025	0,616
	HOMA (3 meses)	0,029	0,604
	Colesterol (24 meses)	0,023	0,674
	LDL (24 meses)	0,013	0,745
Catch-up slow	TG (3 meses)	0,024	0,671
	Insulina (3 meses)	0,001	0,843
	HOMA (3 meses)	0,001	0,849
Catch-up normal	TG (24 meses)	0,010	0,797
Catch-up quick	NS		

p: valor < 0,05; r: Pearson or Spearman

CONCLUSIONS

Positive correlation was observed between the concentrations of chemerin at 3 months as glucose, triglycerides (TG), insulin, as well as HOMA, and TG and C - reactive protein (CRP) after 24 months. Stratifying by sex, in children positive correlations were found between the chemistry and TG at 3 months and with CRP at 24 months. In girls, the correlation was given with glucose, TG and HOMA at 3 months and with total cholesterol and LDL at 24 months. Regarding the type of catch-up, subjects with slow catch-up presented positive correlation between chemistry at 3 months and TG, insulin and HOMA at that same age. In who they submitted catch-up normal positive correlation was observed between Concentration of chemistry at 3 months and glycemia at three months and TG concentrations at 24 months. Therefore, by this means, we can conclude that chemistry levels measured at an early age in PEG children could be considered an indicator of future alterations of biochemical parameters related to the metabolic syndrome, especially in cases of slow catch-up

REFERENCES

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