

have familiar history positive for gastrointestinal diseases (group 5).

Conclusion. We have not found correlation between high FC levels during the first month of age and subsequent development of allergic or gastrointestinal disease. High calprotectin levels during the first month may be related to its cytokine-like activity, playing a pivotal role in the physiologic development of the immune response and the host defence mechanisms against fungal or bacterial infection.

References

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PA13

LACTOBACILLUS GG IMPROVES RECOVERY FROM COW MILK ALLERGY COLITIS COMPARED TO EXTENSIVELY HYDROLYZED FORMULA ALONE

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Introduction. Cow milk allergy (CMA) can cause colitis which resolves feeding an extensively hydrolysed protein formula. Lactobacillus GG (LGG) is effective in treating atopic dermatitis caused by CMA. Fecal calprotectin (FC), a marker of intestinal inflammation, has not been evaluated in infants with CMA colitis.

Objectives. (1) Compare FC in infants with allergic colitis at the time of diagnosis with that of matched controls and changes after a 4 wk period of dietary antigen elimination and (2) determine the effects of the addition of LGG to an extensively hydrolyzed protein formula, Nutramigen LGG® vs. Nutramigen® alone on FC and symptoms.

Methods. Twenty-six formula-fed infants with hematochezia (Group A) were randomly assigned in a double blind manner to Nutramigen LGG or Nutramigen. Group B: age and sex matched healthy controls.

Results. At diagnosis FC in group A was significantly higher than in B (Mean $\mu\text{g/g}$ 325.89 (95% C.I. 269.01–387.76) 131.97 (95% C.I. 118.56–145.38) ($t=6.79$; $p<0.0001$). After one month, FC mean reduction was highly significant ($F=107.7$; $p<0.0001$) and was significantly higher in colitis patients who received N LGG milk than in colitis patients who received N or control groups ($F=12.45$; $p<0.0001$). After the diet occult blood stool was negative in 19/30 (63.33%): in 12/12 patients who received

NLGG, in 5/14 who received N and this difference is statistically significant (χ^2 : 11.85; $p=0.0027$).

In CMA colitis: (1) FC appears to be a good marker of inflammation; (2) Addition of LGG to an extensively hydrolysed formula resulted in a significant reduction of intestinal inflammation compared to the formula alone.

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PA14

FAECAL CALPROTECTIN AS A NON INVASIVE MARKER OF DIGESTIVE DISTRESS IN PRETERM NEONATES: CUT-OFF LEVELS

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In preterms, enteropathy or necrotizing enterocolitis are prominent features of digestive distress, impacting differently enteral feeding. Their diagnosis, currently based on clinical and radiological data, would benefit from a non invasive biological marker.

Patients and methods. This multicentric study enrolled 126 preterms (75 boys, 51 girls) born at a median gestational age of 33 weeks (range: 25.7–35 weeks) with a birth weight of 1760 g (730–2750 g). For each neonate, faecal samples were collected weekly from the end of the first week of life until the end of the first month and if any gastrointestinal event occurred. Samples were immediately stored at -80°C before ELISA measurement (Calprest®, Eurospital, Italy).

Results. Three hundred and twelve samples were analysed. Median calprotectin value was 206 $\mu\text{g/g}$ (16–1240), 393 $\mu\text{g/g}$ (52–996) and 832 $\mu\text{g/g}$ (168–4775) in samples from healthy neonates (252), from neonates with mild digestive symptoms (42) and from those with NEC (18), respectively. ROC curves analysis gave a cut-off value of 363 $\mu\text{g/g}$ (sensitivity 0.65, specificity 0.82) for the development of digestive symptoms and a cut-off of 636 $\mu\text{g/g}$ (sensitivity 0.72, specificity 0.95) for the development of severe symptoms.

Calprotectin might be a promising non invasive clinical screening marker for intestinal distress in neonates.

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