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521 IMPROVED HUMORAL IMMUNE RESPONSE TO MEASLES VACCINE IN INFANTS RECEIVING INFANT CEREAL WITH FRUCTOOLIGOSACCHARIDES.

A Firmansyah, GD Pramita, AL Carrié Fässler, F Haschke, H Link-Amster, Department of Child Health, Gastroenterology Division, Medical Faculty University Indonesia, Jakarta, Indonesia; Nestec, Ltd, Vevey; Nestlé Research Center, Lausanne, Switzerland

We conducted a double-blind randomized controlled study to examine the effects on the immune response after measles vaccination of an infant cereal with milk (Nestle) supplemented with a "prebiotic" mixture of fructo-oligosaccharides and inulin (Prebio[1]).

Eight months-old infants with mixed feeding (breast-, formula, and solids) recruited from Posyandus (integrated Health Service Center, Jakarta) were randomly assigned to two groups. Both groups received the cereals during a period of 10 weeks, and one group was supplemented with Prebio[1] (1g per 25g cereal). Four weeks after introduction of the cereals, all infants were vaccinated with live attenuated measles vaccine (Biofarma, Indonesia). Blood was collected for IgG measles antibody measurement (Elisa; PanBio, Australia) immediately before and 6 weeks after vaccination. Growth, general health status and mild reactions after vaccination (e.g. fever, runny nose) were recorded.

Out of 50 infants enrolled, 24 supplemented (S) and 25 controls (C) completed the study. Post-vaccination IgG antibody levels were significantly higher ($p<0.05$) in group S. IgG antibodies increased 6.6 and 4.2 fold in groups S and C, respectively ($p<0.03$). The post-vaccination IgG positivity rates were 96% (S) and 88% (C). Mild reactions were significantly more often observed in group S ($p<0.01$). No differences in growth and overall health status were observed. We conclude that the regular consumption of infant cerelas with the prebiotic mixture improves immune response after measles vaccination. Further studies are needed to elucidate the mechanism by which the "prebiotic" mixture may yield this change in immune response.

We can conclude that dietary gangliosides increase the number of intestinal IgA plasma cells and the luminal content of this immunoglobulin, which constitutes the main mechanism of defense against microorganisms which enter through the gastrointestinal tract.

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522 SELECTIVE INFLUENCE OF DIETARY NUCLEOTIDES ON DIFFERENT INTESTINAL LYMPHOCYTE POPULATIONS IN MICE AT WEANING.

M Manzano, AC Abadía-Molina, E García-Olivares, A Gil, R Rueda, R&D Dept., Abbott Laboratories; Biochemistry and Molecular Biology Dept., University of Granada, Spain

Nucleotides, the building blocks of nucleic acids, are normal components of human milk and of the human diet, and have been reportedly beneficial for a number of biological processes, such as the stimulation of the immunological response. Nucleotides have been also considered as semiessential nutrients for infant formulas. In this work, we have evaluated the influence of dietary nucleotides on the expression of several surface antigens by different intestinal lymphocyte populations in wealing mice.

Mice at weaning were fed with a semi-purified diet without or with 3 g/kg of individual nucleotides (AMP, CMP, GMP and UMP), respectively. A third group was fed with chow diet as a reference. Animals were sacrificed at different times (0, 4, 7, 12 and 18 days) and lymphocytes from intestinal epithelium (IEL), lamina propria (LPL) and Peyer's patches (PPL) were isolated. The expression of different antigens (CD3, CD4, CD8, CD5, CD22 and CD45R) was analyzed by flow cytometry.

The expression of these antigens changed parallel to the maturation of IEL, LPL and PPL. However, developmental changes of expression for most of the antigens were accelerated in the animals fed on the diet supplemented with nucleotides. On the other hand, significant correlations between the expression of T and B antigens were different in the lymphocyte populations analyzed, and also changed according to the diet within each population. In general, nucleotides promoted the expression of B and T helper cell antigens.

We can conclude that dietary nucleotides may affect the process of maturation and differentiation of intestinal lymphocytes which usually takes place at weaning.

NEW ENDOSCOPIC AND DIAGNOSTIC TECHNIQUES I

523 ENDOSCOPIC INJECTION SCLEROTHERAPY VERSUS RUBBER BAND LIGATION FOR TREATMENT OF BLEEDING ESOPHAGEAL VARICES IN EGYPTIAN INFANTS AND CHILDREN.

Mohamed Ali Genena, Mohamed Khalil Abdel-Khalek, Mohamed Serag Zakaria, Mortada Hasan Elshabrawi, Laila Adbel-Moteleb Selim, Maha Mostafa Morad, Pediatrics, Cairo University Pediatric Hospital; Tropical Medicine, Cairo University Faculty of Medicine, Cairo, Egypt

Endoscopic injection sclerotherapy (IS) has been an effective treatment for bleeding esophageal varices for more than 2 decades,however it is associated with numerous local as well as systemic complications.Rubber band ligation (BL) is a recent treatment that might be equally effective as (IS) with probably fewer complications.

In a prospective randomised trial, we compared the effectiveness and saftey of (IS) and (BL) in 50 infants and children aged 6 monthes up to 14 years (mean 6.5y) presenting with bleeding esophageal varices to the endoscopy unit of Cairo university Pediatric hospital, CAIRO, EGYPT. Twenty five patients were randomly treated with (IS) and the other 25 with (BL). Fourty three patients wer followed for one year.

Eradication of the varices was achieved in 85.7% in (IS) group versus 95.4% in (BL) group.The mean number of sessions required for complete eradication was 4.3 versus 3.8 for (IS) and (BL) groups respectively.

The one year survival was 91.3% and 91.6% for (IS) and (BL) groups respectively. Rebleeding occured in 38.1% vs 27.7%, however recurrence of varices occured in 14.2% vs 31.8% ($p<.02$) in (IS) and (BL) groups respectively. The most statistically significant difference was stricture formation 19% vs 0% in(IS) and(BL)($p<.02$). Therefore (BL) appears to be equally or probably more effective and has fewer complications than (IS) for the treatment of bleeding esophageal varices. By reviewing the litrature and to our knowledge, this was the first study on such large number of pediatric patients using this new technique of band ligation.

Furthur long term studies are needed to evaluate both techniques in the management of bleeding varices in infants and children.

524 ENDOSCOPIC SCLEROTHERAPY VERSUS BAND LIGATION IN THE TREATMENT OF BLEEDING ESOPHAGEAL VARICES IN CHILDREN WITH PORTAL HYPERTENSION.

BM Hassanen, AB El-saadaney, EM Waked, BE Behairy, MA Rashad, Dept. of Pediatrics, Benha Faculty of Medicine, Zagazig University; Dept. of Medicine; Dept. of Pediatrics, Liver Institute, Menoufiya University, Egypt

Bleeding esophageal varices is is an important complication of portal hypertension and needs emergency intervention. Endoscopic therapy with its two variants (Endoscopic Variceal Sclerotherapy (EVS), and the newly introduced Endoscopic Variceal band Ligation (EVL)) stands out as the most important line for the management of bleeding esophageal varices. This study was aimed to compare both techniques (EVS&EVL) as regard effectiveness, safety and subsequent complications. 40 children with bleeding varices secondary to portal hypertension were randomized to receive either treatment modalities. 20 patients for each group. The clinical, abdominal sonographic and endoscopic finding were similar in both groups. The patients of both groups after variceal eradication were followed for a mean of sex months during which we determined the incidence of complications.

Both techniques were equally achieving variceal eradication (88.2% for sclerotherapy versus 94.4 for band ligation). To reach complete eradication (EVL) need less sessions than (EVL) but the difference was not significant {3.8+_ 1.3 for EVL versus 4.4 _+ 1.2 for (EVS) }. Both techniques showed no difference as regard recurrence of varices as 20% after sclerotherapy and 35.3% after band ligation but the onset of recurrence was delayed in (EVL) treated group than in (EVS) treated group (4.5 + 1.1 months for (EVL) versus 3.7 + 0.6 M in (EVS)). Also incidence of rebleeding is less in (EVL) group in comparison to (EVS) group but not statistically significant (22.2 % in (EVL) group versus 35.3. in (EVS) group).