

Patients and methods. Patients with severe obesity (BMI > 95%) were considered for the enrolment in the study. Obese subjects were screened for weight, height, body mass index (BMI) and diabetes using an oral glucose tolerance test (OGTT). Protein C-reactive (PCR) was measured as marker of systemic inflammation; rectal nitric oxide (NO) (measured with membranes of dialyses filled up with isotonic solution –20 mm KCl, 30 mm NaHCO₃, 110 mm NaCl and held in rectal centre for 30 min) and faecal concentration of calprotectin (Kit ELISA) were used as markers of bowel inflammation.

Results. Twenty obese patients (13 males; median age 10.2 ± 3.7 years) were enrolled. 11/20 (55%) patients had pathological PCR, while in 12/14 (86%) patients NO rectal was pathological. Seventeen out of 20 (85%) children showed glucose abnormalities ($p < 0.0001$), in particular 4 (20%) showed diabetes and 13 (65%) were iperinsulinaemic. Among these patients, PCR was pathological in 3 of 4 (75%) diabetic patients and in 8 of 13 (62%) iperinsulinaemic children ($P < 0.02$). Rectal NO was pathological in 8 of 12 (67%) insulinaemic patients and in 2 of 12 (17%) patients with diabetes ($P < 0.03$). Faecal calprotectin was pathological only in one child.

Conclusions. Our results suggest that there is a significant relationship between severe obesity and glucose abnormalities. Further, the presence of glucose abnormalities is significantly associated with systemic and gut inflammation.

doi:10.1016/j.dld.2007.07.121

PA 11

FOOD ALLERGY IN ITALIAN PAEDIATRIC POPULATION: PRELIMINARY RESULTS OF A NATIONWIDE STUDY ON PREVALENCE, CLINICAL CHARACTERISTICS AND COMMON DIAGNOSTIC APPROACHES

M. Tardi^a, G. Guariso^b, S. Ruotolo^a, A. Castaldo^a, G. Florio^a, G. Liberatore^a, N. Gasparini^a, A. Occhinegro^a, G. Ruggiero^a, E. D'Agostino^a, M. Ferrara^a, M. Russomando^a, L. Moragni^a, A.P. Mongibello^a, A. Frezzetti^a, L. Ferraro^a, C. Nichetti^b, L. Cosenza^a, R. Troncone^a, R. Berni Canani^a

^a Department of Pediatrics and European Laboratory for the Investigation of Food Induced Disease (ELFID), University of Naples "Federico II", Italy

^b Department of Pediatrics University of Padova, Italy

Background. Food allergy (FA) prevalence and incidence are increasing in many western countries. The approach to a child with suspected FA could be difficult leading to possible diagnostic and therapeutic errors. Data on epidemiology of FA in the Italian paediatric population are scarce.

Aims. To define epidemiology and common diagnostic approaches to children with FA.

Methods. A nationwide multicentre observational study was planned in collaboration with family paediatricians in charge of at least 800 subjects. Data were collected through a questionnaire including main demographic characteristics, clinical manifestations, food allergens, diagnostic work-up.

Results. Fifty family paediatricians participated in the study, 41 physicians provided full clinical data. A FA diagnosis was reported in 322 out of the 40,756 children (0.79 %). Data of 216 patients were available for the analysis. The diagnosis of FA was performed in 192 out of 216 patients before 3 years of life. Reported symptoms were gastrointestinal in 93 children (diarrhoea, vomiting, gastro-oesophageal reflux, abdominal pain, colitis, constipation), respiratory in 43 (laryngospasm, rhinitis, wheezing, asthma), dermatological in 160 (eczema, urticaria, angio-oedema) and systemic in 23 (anaphylaxis, growth retardation) out of 216 patients. Specific allergens involved were: cow's milk (157/216), eggs (52/216), fish (35/216), tomato (17/216), peanut (17/216), soy (9/216) and wheat (3/216). An open or blind oral food challenge was performed in only 67 out of 216 (31.0%) patients. In the remaining number of patients the diagnosis was performed on the basis of elimination diet response alone or in combination with allergologic test results (skin prick tests or IgE antibody to specific foods) in 31.0% of children, or on the basis of the results of allergologic tests alone in 38.0%.

Conclusions. Our results suggest a prevalence of FA in the Italian paediatric population reduced in comparison with other western countries. A correct diagnostic work up was reported in a minority of cases. The data underscore the necessity of greater standardization of diagnostic procedures for FA. Future studies are necessary to assess the real incidence of FA in Italian children using a correct diagnostic work-up.

doi:10.1016/j.dld.2007.07.122

PA 12

RELATIONSHIP AMONG GASTRIC ELECTRICAL ACTIVITY, GASTRIC EMPTYING AND INTESTINAL PERMEABILITY RECORDED IN PRETERM NEWBORNS DURING THE FIRST MONTH OF LIFE

F. Indrio^a, F. Raimondi^b, G. Riezzo^c, O. Montagna^a, M.L. Valenzano^a, L. Polimeno^d, R. Francavilla^a

^a Dipartimento di Pediatria Università di Bari, Italy

^b Dipartimento di Pediatria Università di Napoli, Italy

^c Laboratorio di Fisiopatologia Sperimentale IRCCS Castellana Grotte, Italy

^d Dipartimento Trapianti Sezione di Gastroenterologia Università di Bari, Italy

Immaturity of motility, intestinal epithelial barrier function and absorptive capacity may play a role in the pathophysiology of intestinal diseases in preterms. We determined the gastric electrical activity and emptying, and intestinal permeability, in preterm newborns during the first month of life to verify the changes in motility and permeability, and their relationships.

Patients and methods. Eighteen preterm newborns 34.4 ± 0.8 weeks completed the study. They underwent the recording of gastric electrical activity by means of cutaneous electrogastrography (EGG), the ultrasound examination of gastric emptying, and the lactulose-to-mannitol ratio from permeability-absorption test on days 3, 7, 15 and 30 after birth.

Results. Gastric electrical activity and emptying showed only slight changes over time whilst an evident maturation in permeability was evident between day 3 and day 7. Besides, a close correlation was present only between the half emptying time and EGG parameters (slow wave and power ratio) expressed as the difference between day 7 and day 3.

Conclusions. In preterm healthy newborns of 34 weeks gestational age, electrical and motor activity are completely developed at birth and improvement of gastric electrical activity is strictly related to gastric emptying time. On the other hand, the intestinal epithelial barrier clearly improves during the first week of life.

doi:10.1016/j.dld.2007.07.123

PA 13

LYMPHOCYTIC GASTRITIS IN PATIENTS WITH COELIAC DISEASE

M. Montuori^a, F.M. Magliocca^b, R. Nenna^a, R.P.L. Luparia^a, C. Perricone^a, F. Carpino^b, M. Bonamico^a

^a Department of Paediatrics, University of Rome "Sapienza", Rome, Italy

^b Department of Experimental Medicine and Pathology, University of Rome "Sapienza", Rome, Italy

Background. Lymphocytic gastritis is a histological entity characterized by a severe intraepithelial lymphocytosis (lymphocytes number more than 25 of 100 columnar epithelial cells) of the gastric mucosa, associated with increased chronic inflammation in the lamina propria. It has been reported in patients with *Helicobacter pylori* (Hp) infection and in adult and in children with coeliac disease (CD). Lymphocytic gastritis in CD disappears after a gluten-free diet.

Aim. To evaluate the prevalence and characteristics of lymphocytic gastritis in a large series of CD children and adolescents with or without Hp infection.