

are likely to be more susceptible to these problems due to possible disturbances of both oesophageal function and respiratory regulation at this stage of life. In our cases almost all GER-related apnoeas were linked with non-acid GER (63/64). pH-monitoring alone does not recognize these episodes of GER. This highlights the importance of combined pH-MII monitoring to characterize all GER features. Furthermore 20 apnoeas were related to SGER that is possible recognize only by a manual analyse of the impedance registration. Most apnoeas are preceded by reflux (48/64): this finding supports our hypothesis that GER is the causative factor. Seventeen percent of apnoeas was related to swallow events; further studies are necessary in order to clarify the relationship between these two events.

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ALLERGIC COLITIS IN INFANTS: PRELIMINARY RESULTS OF SIGENP PROSPECTIVE STUDY

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Background. Lower gastrointestinal bleeding (LGB) is an event that occurs prevalently in the first months of life in apparent healthy infants. In some patients it could be correlated to allergic colitis, to viral or bacterial infections, to anal fissures, Hirschsprung enterocolitis and inflammatory bowel diseases. The real prevalence of colitis in infants is unknown because clinical features, laboratory results, endoscopical and histological findings are non-specific. Often these infants are not investigated and ex adjuvantibus are treated with costly hypoallergenic formula or restricted diet with presumptive diagnosis of allergic colitis.

Aim. Evaluation of prevalence and outcomes of allergic colitis in healthy infants with a prospective study. A purpose of a diagnostic-therapeutic protocol for rectal bleeding in healthy infants.

Methods and preliminary results. The study includes healthy infants with onset of bloody stools under 12 months of life in whom infections colitis, intussusception, necrotizing enterocolitis (NEC) and morphological abnormalities of the gastrointestinal tract are excluded. All patients are examined for family history of atopy and inflammatory bowel disease; complete blood cell count; peripheral eosinophils; serum total IgE and specific IgE antibodies to cow's milk, egg and wheat; haemoglobin and albumin concentration; routine stool for occult blood and culture. Eosinophils and lactoferrin in the stool are not tested routinely. Patients are divided in two groups according to the performing (group A) or not (group B) of lower intestinal endoscopy, after parental consensus. We consider allergic colitis (AC) by the presence, in the histological sections, of a large numbers of eosinophils in the lamina propria (>60/10 HPF) or any eosinophils in the crypt epithelium or muscularis mucosae, with normal glandular architectural. Aspecific colitis is defined as significant increase of inflammatory cells in the lamina propria without eosinophilia and significance distortion of the glands. Patients with histological criteria for AC are treated or with protein extensively hydrolysed formula or an amino acid formula, or with breast feeding with elimination of cow's milk protein in the maternal diet, or with hypoallergenic diet. Otherwise patients with diagnosis of non-specific colitis follow free diet. In group B patients with elevated peripheral eosinophils and/or specifically elevated IgE to cow's milk and/or eosinophils in the stool smear, are treated with hypoallergenic diet for 4-6 weeks and after tested by oral challenge to confirm the food allergy; in patient without risk factors for allergy free diet is recommended. The clinical follow-up in both groups provides for three steps: at 4-6 weeks, at 4 months and at 6 months with the possibility of endoscopy in group A and group B if rectal bleeding is still present. Recovery in both groups is established with lack of rectal bleeding after a negative oral provocation test (OPT). During the last year we enrolled prospectively 17 healthy infants (10 male and 7 female) with rectal bleeding. The age of onset of symptoms was 3.6 months (± 2.3 S.D.). Familiarity to atopy (almost one parent) was

found in five patients (29.4%), familiarity to IBD in two patients (11.8%). Diet was composed of exclusively breast milk in eight patients, breast milk and other formula in three patients, adaptive formula in five patients and cow's milk in one patient. The serum total level of IgE was elevated in eight patients (47.1%); specific IgE to cow's milk protein was found in five of them. Eosinophilia was found in four infants (23.5%) in whom also total serum IgE were high; anaemia and piastriosis was found in two patients (11.8%); hypoalbuminaemia in two patients (11.8%). Stool culture was negative in all patients. In group B eosinophil and lactoferrin were tested in five patients and resulted all positive. In group A (seven infants studied with lower endoscopy) four had AC (57.1%); two infants had non-specific colitis (28.6%); one patient had oedema of rectal mucosa (14.3%). All 10 patients of group B and 4 patients with AC and 1 patient with associated protein losing enteropathy, follow a hypoallergenic diet (4 breast-feeding with restricted diet in the mother, 13 hydrolyzed formula) with resolution of bleeding in few days. OPT was performed not before 6 months in group A, earlier in group B. The final clinical follow-up at 6 months showed completely remission in 16 patients; 1 infant of group A repeated endoscopy after 3 months for persistent rectal bleeding and diagnosis of Crohn disease was performed.

Conclusions. Rectal bleeding in healthy infant is generally a benign and self-limiting disorder; when AC is suspected on the basis of clinical criteria an hypoallergenic diet is available but the diagnosis of correlated food allergy must be confirmed with OPT before suggesting hypoallergenic diet for a long time. When rectal bleeding does not resolve a complete investigation with lower endoscopy is recommended. More cases are requested to complete the study.

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HLA-RELATED GENETIC RISK FOR COELIAC DISEASE

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Aim. Several studies have shown a higher prevalence of CD in sibs of CD patients compared with the general population, with risk estimates ranging from 8 to 12%, but this risk is not the same for all sibs. The aim of the present study is to evaluate the real risk in the Italian population that a sib of symptomatic patient will develop CD and to provide to the parents of a child with CD the most precise estimate of the risk for any future child.

Method. A cohort of 188 Italian families was composed of probands with CD, at least one sib, and both parents. CD status was determined and HLA-DQ genotyping performed for all family members. To increase the size of the proband sample and to improve the robustness of the estimate, the study also used a data set of Italian triads (127 probands and both their parents) also genotyped for HLA-DQ.

Results. The overall risk that a sib of a CD patient will develop the disease is estimated at 10% in this sample. The risk estimate ranges from 0.1 to 29% when HLA-DQ information of the proband, parents and sib is considered. We found a negligible risk (lower than 1%) for 40% of the sibs of probands, a risk greater than 1% but less than 10% for 30%, and finally a high or very high risk (above 25%) in one-third of families.

Conclusion. These results make it possible to provide more accurate information to parents with child with CD about the real risk for another child. It is now possible, also before the birth of a child, to provide to the parents an estimate of his order risk for celiac disease. Finally, specific follow-up can thus be offered for babies at high risk and a great amount of suffering, anxiety and healthcare resource use could thus be prevented.

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