

failure of medical therapy. The patients who underwent minor surgery for perineal lesions were excluded.

Thirteen (81%) patients were treated with mesalamine and concomitant therapy with azathioprine (AZA); 3 (19%) patients were treated with mesalamine not associated to immunomodulators for intolerance. In 2 (13%) patients biological therapy with Infliximab was started: in the first one because of a perianal fistula and in the second one because of a relapse of the disease despite treatment with AZA and mesalamine. Biological therapy had not been administered to any patients before surgery.

During the follow-up period (3.5 years mean period) none of the patients interrupted the therapy and none of the patients needed re-surgery.

Conclusion. From our data an adequate therapy with mesalamine and AZA improved the quality of life of the patients avoiding a second surgery. Moreover an endoscopic and histological surveillance help to target the optimal treatment. Futures studies are needed to understand the role of biological therapy and the timing of endoscopic follow-up.

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PA34

CELIAC DISEASE AND AUTOIMMUNE THYROID DISEASE: ONE YEAR EXPERIENCE

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Purpose of the study. Celiac disease (CD) is a permanent intolerance of gluten, genetically determined. It can be associated to autoimmune disorders such as autoimmune thyroiditis, type I diabetes mellitus and autoimmune liver diseases. The aim of the study is to evaluate the prevalence of the autoimmune thyroid disease at the time of celiac disease diagnosis.

Patients and methods. From January 2007 to January 2008, 72 paediatric patients referred to Paediatric Gastroenterology Unit of Parma for suspected celiac disease (pathological value of anti-EmA and anti-tTG) underwent upper endoscopy. The duodenal biopsy confirmed the diagnosis in 60 patients (range of age: from 13 months to 18 years). At the time of the diagnosis all patients underwent serological testing for thyroid hormone (TSH, T4), thyroglobulin antibodies (Tg Ab), thyroid peroxidase antibodies (Tp Ab) and thyroid ultrasound (US). The patients underwent blood exams at diagnosis, 6 and 12 months after the beginning of a gluten free diet.

Results. In 19 patients (31.5%) (15 female, 4 male; range of age: from 2 to 18 years, mean age 9.5 years) alteration of serological (autoantibodies, thyroid hormone) or ultrasound parameters were found. 8 of these patients (6 female, 2 male) showed autoimmune chronic thyroiditis at US: 4 patients

with euthyroidism with pathological value of autoantibodies, 3 patients with increased value of TSH and normal value of autoantibodies, 1 patient with euthyroidism and normal value of autoantibodies. The 4 patients with abnormal value of autoantibodies presented in 2 cases alteration of Tg Ab, and in 2 cases abnormalities of Tp Ab.

In 4 female patients both Basedow disease and celiac disease were diagnosed at the same time. In 3 out of 4 there was low level of TSH and pathological level of autoantibodies, in the other patient both TSH and autoantibodies were pathological. In all 4 patients a therapy with tapazole was started.

In 7 cases (5 female, 2 male) no autoimmune thyroid disease was found: 4 patients had high level of autoantibodies but normal TSH and thyroid US, at 6 and 12 months follow-up TSH continued to be in the normal range of value, but Tg Ab and Tp Ab were higher with no US alterations.

In 3 patients high level of TSH with normal Tg Ab and Tp Ab and normal thyroid US were found; at 3 and 6 months follow-up TSH were the same in 2 patients while it was doubled in the last patient.

Conclusion. Our data confirmed the presence of a relationship between celiac disease and autoimmune thyroid disease, therefore it is important to evaluate thyroid parameters in celiac patients.

However even if it seems that the gluten free diet does not influence positively thyroid disease more studies need to evaluate the long-term effects of the diet.

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PA35

LEVELS OF INFLAMMATORY CYTOKINES FROM PERIPHERAL LYMPHOCYTES OF CHILDREN WITH COW'S MILK ALLERGY

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Cow's milk allergy (CMA) is defined as an immunologically mediated reaction against cow's milk antigens. The incidence of CMA ranges from 1.9 to 7.5% in population-based studies. The diagnosis of CMA is based on a definite disappearance of symptoms of CMA after elimination of cow's milk from the diet (and the breastfeeding mother's diet), reoccurrence of identical symptoms during cow's milk challenge, disappearance of symptoms after reelimination of cow's milk.

Aim of the study. To investigate cytokine secretion (TNF- α , IL10, IL12p70) in culture supernatants of lymphocytes

stimulated against cow's milk and goat's milk proteins, in children with cow's milk allergy (CMA).

Patients and methods. Peripheral lymphocytes were isolated from heparinized blood of 10 pts with CMA (mean age: 8.4 ± 6.4 mo) and 10 controls (mean age: 7.4 ± 3.1 mo) by gradient centrifugation and suspended in culture with cow's and goat's milk protein mixture, β -lactoglobulin and caseins. TNF- α , IL10, IL12p70 have been assayed in the supernatants (ELISA).

Results. A significant increase in TNF- α , IL10 and IL12p70 secretion was observed in supernatants from patients after stimulation against cow's milk antigens. Cytokine levels obtained after stimulation against goat's milk antigens are reported in the table:

	TNF- α patients	TNF- α controls	<i>p</i>	IL-10 patients	IL-10 controls	<i>p</i>	IL-12p70 patients	IL-12p70 controls	<i>p</i>
Cow's protein mixture	969 $\pm$ 228	441 $\pm$ 118	<0,05	266 $\pm$ 132	140 $\pm$ 29	<0,05	189 $\pm$ 23	102 $\pm$ 16	<0,05
Goat's protein mixture	804 $\pm$ 270	403 $\pm$ 91	<0,05	460 $\pm$ 82	125 $\pm$ 5	<0,05	159 $\pm$ 34	111 $\pm$ 24	<0,05
Cow's β -lactoglobuline	3090 $\pm$ 1273	455 $\pm$ 154	<0,05	244 $\pm$ 43	63 $\pm$ 7	<0,05	261 $\pm$ 91	120 $\pm$ 10	<0,05
Goat's β -lactoglobulin	589 $\pm$ 372	548 $\pm$ 87	NS	109 $\pm$ 23	262 $\pm$ 1	NS	217 $\pm$ 40	182 $\pm$ 101	NS
Cow's caseins	1697 $\pm$ 749	435 $\pm$ 118	<0,05	408 $\pm$ 117	142 $\pm$ 69	<0,05	132 $\pm$ 19	49 $\pm$ 3	<0,05
Goat's caseins	622 $\pm$ 319	347 $\pm$ 63	NS	610 $\pm$ 65	202 $\pm$ 9	<0,05	94 $\pm$ 15	40 $\pm$ 5	NS

Conclusions. Our data confirm that children with CMA should not receive a goat's milk containing diet, moreover higher levels of TNF- α , IL10 and IL12p70 obtained from peripheral lymphocytes after stimulation against cow's milk proteins could represent a useful test to use for the diagnosis of CMA in children. Further data are needed to confirm this hypothesis.

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NEW THERAPY FOR CELIAC DISEASE

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Background. Chitosan is a D-glucosamin polymer extracted by chitin, a shellfish protein. This alimentary supplement has been used in diet for its hypothetical capacity to reduce intestinal fat uptake. In vitro studies suggested that chitosan is able to inhibit gliadin interaction with intestinal mucosa.

Aims. To evaluate chitosan property to prevent gluten toxicity in celiac individuals.

Materials and methods. Two patients (age >12 years old) with celiac disease diagnosis according to ESPGHAN criteria, on gluten-free diet for at least 5 years, were recruited for gluten challenge in association with chitosan administration. Firstly, the patients underwent a complete clinical evaluation: inflammatory and nutritional markers, antiendomysium (EMA) and antitransglutaminase (tTG-IgA) antibodies, iron load, intestinal permeability, steatocrit, fecal calprotectin, duodenal biopsy. They assumed 100 g of gluten products twice a day, equal to 8 g of gluten/day, for 60 days; they took

2 capsules of 0.5 g of chitosan 10 min before gluten. At the end of challenge patients were subject to a new clinical evaluation with all assays performed before challenge, including duodenal biopsy.

Results. Before challenge, both patients had normal intestinal mucosa (Marsh T0) and negative clinical and laboratory tests. The patients did not show adverse reactions during challenge. However, after challenge EMA and tTG-IgA became positive (tTG = 176 and >200) and intestinal biopsies showed partial villous atrophy (Marsh T3b).

Conclusion. These preliminary results demonstrate that chitosan is not able to avoid intestinal damage caused by gluten in 2 patients tested.

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HEALTH-RELATED QUALITY-OF-LIFE (HRQoL) IN CHILDREN WITH CELIAC DISEASE

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Introduction. Celiac disease (CD) is a permanent intestinal intolerance secondary to dietary intake of gliadine. Permanent strict gluten free diet to prevent long-term complications remains the current treatment. Unfortunately, long-term dietary adherence is often poor. This program is difficult and can impair the quality of life of both patients and family.

Aim. The aim of this study was to investigate the nature and prevalence of Health-Related Quality-of-Life (HRQoL) problems in children with celiac disease, using a validated questionnaire.

Methods. 22 children with certain celiac disease (9 M and 13 F: aged 4–14 years) were included. The adherence to the gluten-free diet was evaluated by clinical growth examination, routinely serologic tests. After informed consent obtained, the CHQ- PF 50 validated questionnaire has been submitted to the caregivers. It explores 15 domains such as general health, behaviour, physical activity et al.

Results. We have observed a statistically significant difference about the global health (23.9 vs. 66.7, $p < 0.00001$), behaviour (19.9 vs. 65.2, $p < 0.007$), physical activity (26.0 vs. 85.7, $p < 0.00001$) with respect to controls.

Conclusion. In our opinion the lifelong gluten-free-diet needs the intervention of a multidisciplinary team (paediatric gastroenterologist, dietologist and psychologist). To submit a validate questionnaire for the evaluation of HRQoL, is use-