ALCAT Test results in the treatment of gastrointestinal symptoms

Berardi L.^, De Amici M.°, Castello M.^, Torre C.°, Giunta V.°, Legoratto S.^, Vignini M.^

^ Dermatology Clinic- University of Pavia- Foundation IRCCS Hospital San Matteo; Pavia, Italy
° Hospital Pediatric Clinic – Foundation IRCCS Hospital San Matteo; Pavia, Italy

BACKGROUND

Specific foods and certain additives can induce adverse gastrointestinal (GI) reactions. Food intolerance in the absence of specific digestive enzymes is the result of toxic by-products from undigested foods that induce GI symptoms different from allergic symptoms.

AIM OF THE STUDY

The aim of this study was to evaluate whether food intolerance is associated with GI disease.

METHODS

48 patients (37 females, 11 males, median age 38.5 years) affected by GI symptoms were tested by ALCAT. Patients also answered a survey regarding a tailored (diet based on ALCAT results) two month elimination diet.

Clinical evaluation was also performed, considering the symptom score before and after initiating the diet (0-10), everyday conditions (score 0-10), dietary changes (0-10) and symptom improvement after the diet (1=nothing; 2=mild; 3=very important).

The ALCAT test electronically measures volumetric shifts in blood cells following incubation with food antigens. The degree of reactivity was determined by comparing a baseline distribution curve against the distribution curve generated by the analysis of each test agent/blood sample and calculating the absolute differences between curves and the standard deviation (SD). Any reactivity under 2 SD was considered non-reactive and these foods were allowed in diet.

Quantitative parameters were reported as medians (md) and 1st-3rd quartiles (IQR). The Wilcoxon and the Kruskal-Wallis test were performed. A p-value ≤ 0.05 was considered statistically significant.

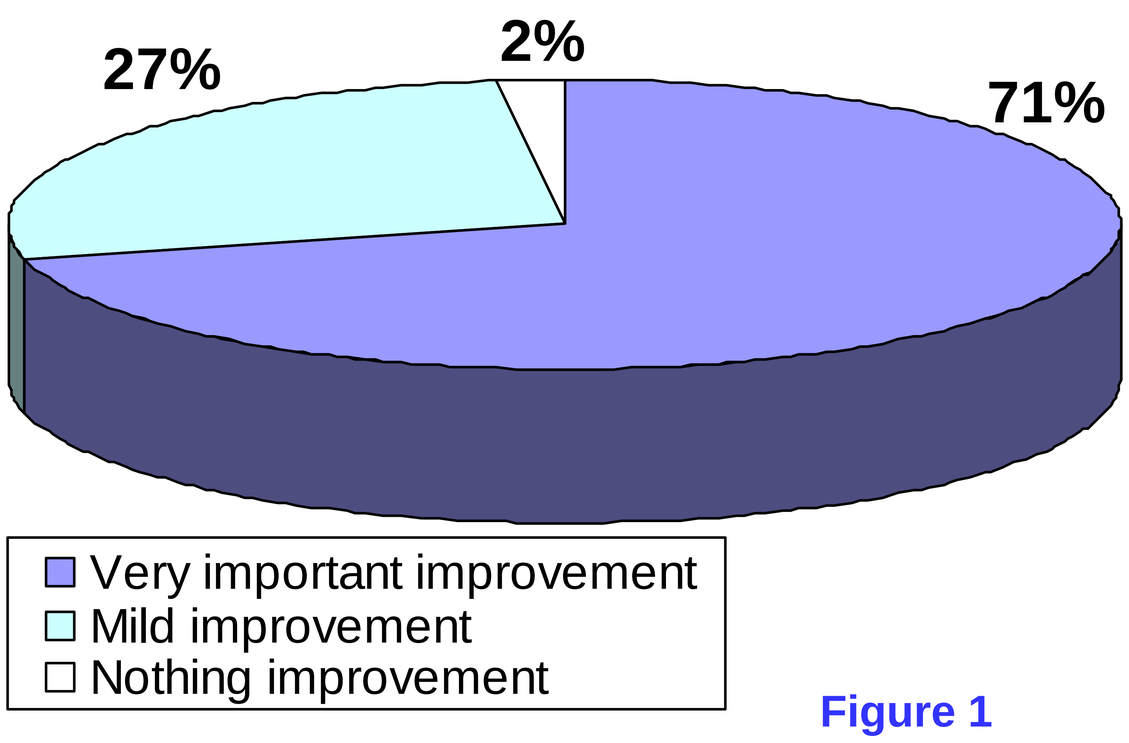

Figure 1

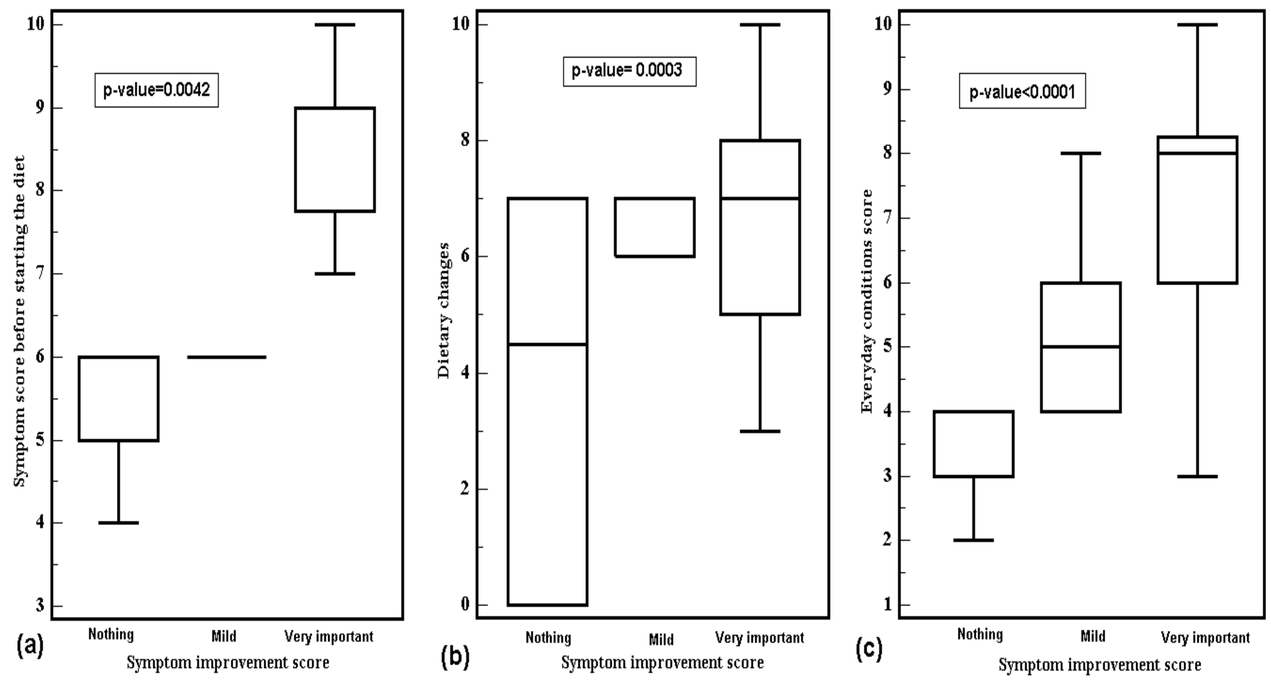

Figure 2

RESULTS

71% of patients exhibited a very important improvement in symptoms, 27% mild improvement and 2% no change (**Figure 1**).

The symptom score before starting the diet (p=0.0042, **Figure 2a**), dietary changes (p=0.0003, **Figure 2b**) and everyday conditions score (p=0.0015, **Figure 2c**) significantly changed with regard to symptom improvement score. In particular, higher values in dietary changes score, everyday conditions score and symptom score were associated with large improvements. Finally, the difference between symptom score before (md: 6.5; IQR: 6-8) and after the diet (md: 4; IQR: 3-5) was significant (p<0.0001, **Figure 3**).

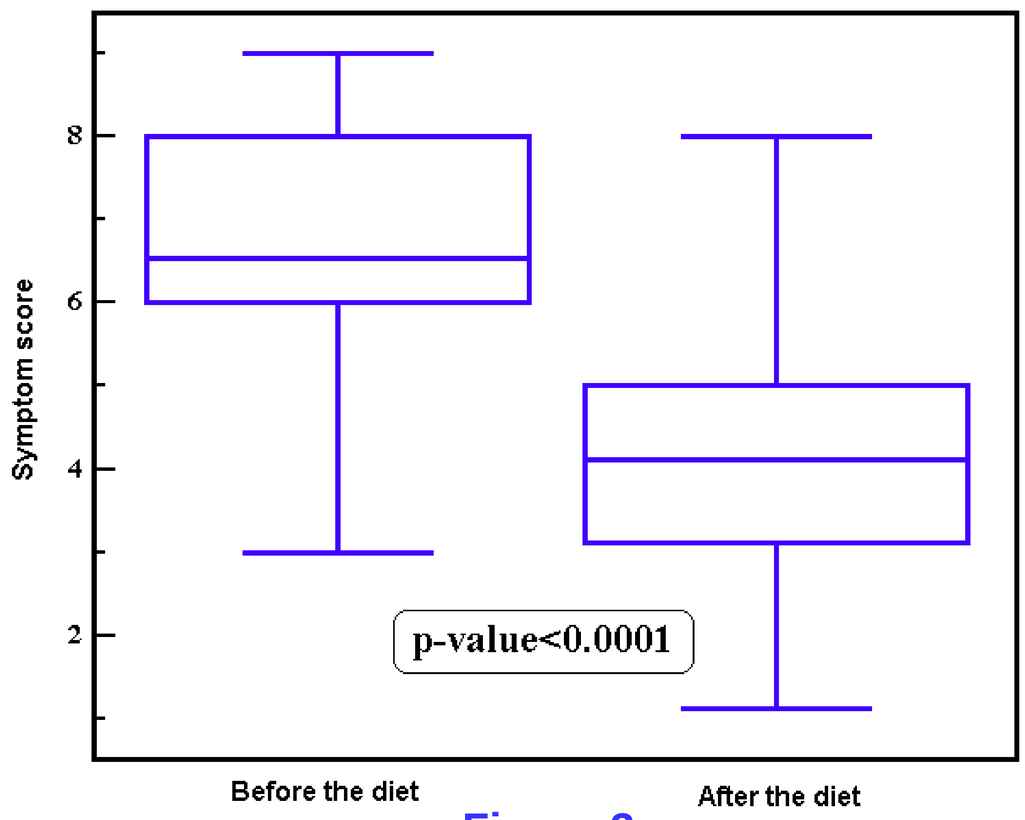

Figure 3

CONCLUSIONS

The study provides evidence that an elimination diet based on ALCAT results improves symptoms in 71% of patients. In particular, symptom improvements were most evident in patients with higher symptom scores, dietary changes and everyday conditions.