

**Table III - Average  $\pm$  DS of blood iron, transferrin and ferritin in the patients with blood iron  $<60\text{mg/dl}$  at the first (T0) second (T1) and third (T2) evaluations in Group 1 and Group 2**

	T0 Trattamento A	T1 Trattamento A	T2 Trattamento A	T0 Trattamento B	T1 Trattamento B	T2 Trattamento B
Sideremia mg/dl	36,4 $\pm$ 9,8	65,3 $\pm$ 11,8	57 $\pm$ 28,2	38,6 $\pm$ 8,8	40,7 $\pm$ 8,1	39,2 $\pm$ 7
Transferrin mg/dl	315,35 $\pm$ 61,17	316,41 $\pm$ 60,91	321,64 $\pm$ 64,61	320,45 $\pm$ 63,22	319,36 $\pm$ 69,88	320,76 $\pm$ 69,45
Ferritin ng/ml	26,4 $\pm$ 2,2	25 $\pm$ 3,7	23,7 $\pm$ 2,1	28 $\pm$ 5,4	26 $\pm$ 3,8	25,9 $\pm$ 3,8

**Table IV - Average  $\pm$  DS of blood iron, transferrin and ferritin in the patients with ferritin  $<20\text{ng/ml}$  at the first (T0) second (T1) and third (T2) evaluations in Group 1 and Group 2**

	T0 Trattamento A	T1 Trattamento A	T2 Trattamento A	T0 Trattamento B	T1 Trattamento B	T2 Trattamento B
Sideremia mg/dl	72,7 $\pm$ 7,6	76,6 $\pm$ 8,3	71,6 $\pm$ 8,9	86,1 $\pm$ 14,7	84,2 $\pm$ 15,5	87,1 $\pm$ 16,5
Transferrin mg/dl	324,29 $\pm$ 57,80	328,47 $\pm$ 53,76	329,29 $\pm$ 57,18	291,34 $\pm$ 60,45	296,03 $\pm$ 59,25	301,12 $\pm$ 59,39
Ferritin ng/ml	8,6 $\pm$ 4,4	13,9 $\pm$ 6,6	15,5 $\pm$ 10,5	12,9 $\pm$ 3,6	12,7 $\pm$ 2,9	13,8 $\pm$ 3,3

Table III lists the values of blood iron, blood transferrin and blood ferritin of the patients in Group 1 (15 treated with the food supplement and 13 with the placebo). Analysis of the results shows that, after 30 days of treatment, only Treatment A patients demonstrated a significant ( $P<0.001$ ) and considerable improvement in blood iron, which was also the case after 60 days ( $P<0.005$ ). One very important aspect arising from analysis of the results obtained was the fact that after 60 days of treatment with the food supplement, 100% of the patients responded to the treatment, producing an increase in blood iron. The patients in the Treatment B group (placebo) did not show any significant improvement in blood iron levels either after 30 days or after 60 days. Table IV lists the blood iron, blood transferrin and blood ferritin values of the patients in Group 2 (10 treated with the food supplement and 11 with the placebo), who showed baseline blood ferritin values lower than  $20\text{ng/ml}$ . All these patients turned out to have normal blood iron ( $< 60 \mu\text{g/dl}$ ). Analysis of the results recorded after 60 days of treatment with Captafer shows a significant increase ( $P<0.05$ ) in blood ferritin values; however, the patients treated with the placebo showed no significant variation. No side effects of any type were noted during the consumption of the food supplement; furthermore, the compliance of the patients who took the product was excellent.

In terms of evaluation of the patients' mood using the Beck Questionnaire, a statistically significant improvement in comparison with the baseline level ( $7 \pm 2$  vs  $3 \pm 1$ ,  $P<0.05$ ) was noted after 60 days of treatment exclusively in the patients receiving the Captafer treatment. Meanwhile, the scores from the 2 evaluations were virtually identical for the patients who received the placebo ( $6 \pm 3$  vs  $6 \pm 1$ ).

### Discussion and conclusions

The treatment of iron deficiency by consuming a food supplement composed of nutrients which facilitate iron absorption and promote the correct use of iron by the organism<sup>14</sup> could offer a valid alternative to the classic treatment using iron salts<sup>14</sup> which, unfortunately, frequently presents significant side effects relating to the gastrointestinal tract<sup>15</sup>. This study has in fact demonstrated the efficacy, in comparison with the placebo, of taking a 60-day course of a food supplement (composed of hydrolyzed sea fish cartilage, vitamin C, vitamin E, folic acid, zinc and copper), in improving the blood iron and blood ferritin values in a group of fertile patients suffering from iron deficiency. This is an original result in the sense that previous studies carried out to demonstrate the efficacy of taking specific nutrients in improving iron absorption and bioavailability were often