

ANTIOXIDANT THERAPY OF VITILIGO

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Case 1

A.A. 35 year old man came to Anadolu Health and Research Foundation on June 2, 2007 complaining of vitiligo.

He first noticed white lesions on his hands during 1999. They did not disturb him except for their unusual appearance. The lesions slowly enlarged in every direction and became whiter as time passed. In 2002 a small

at both junctions of his lips (Figures 1a and 1b). Patient became alarmed by the continuous enlargement of the involved areas and accepted radiation therapy. This was however unsuccessful at which time a larger area of vitiligo appeared over the left clavicle. Next small lesions occurred behind both ears. These lesions appeared responding favorably to local treatment with cortisone



Figure 1a: 02 June 2007



Figure 1b: 02 June 2007

spot at his chin appeared and soon afterwards similar lesions developed involving the eyebrows, eyelids, the area between his eyebrows and the tip of his nose. These were followed by two oval lesions at the junction of left scalp and forehead. Few months later lesions appeared

containing ointments. Soon thereafter and to the dismay of the patient lesions recurred. Later new lesions were observed at both groins.

The patient at this point came to our clinic. In his personal history there was nothing else in relation to vitiligo. Neither did history of his family produce any information concerning this ailment. Physical examination showed an

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Figure 2a: 25 August 2007



Figure 2b: 25 August 2007



Figure 2c: 25 August 2007

otherwise healthy young man who appeared deeply concerned and depressed.

Routine laboratory procedures uncovered no remarkable findings. Urinalysis and blood counts were within normal limits. Serum zinc of a specimen taken under standard conditions was 81 µg/dL, copper was 80 µg/dL, serum magnesium was 2.3 µg/dL. Zinc and copper contents of 10¹⁰ red cells were 15.0 and 3.8 µg respectively.

the facial lesions (Figures 2a, 2b and 2c). His forehead, eyelids, nose and chin had all acquired a color very close to his normal skin color. Only at both junctions of lips, both sides of the chin had few very small lesions. The other lesions of the hands and arms had nearly 30% improved. Some of the lesions had acquired many dark color points of 1-2 mm in diameter while other lesions appeared to have developed a color somewhat darker

Parameters Date	S e r u m				10 ¹⁰ Erythrocytes		Tissue	
	Zinc (µg/dL)	Copper (µg/dL)	Magnesium (µg/dL)	MDA (nanomol/ml)	Zinc content (µg/dL)	Copper content (µg/dL)	Zinc (µg/dL)	Copper (µg/dL)
02.06.2007	81	80	2.3	0.5	15.0	3.8	1582	400
30.07.2007	89	83	2.3	0.5	14.0	4.5	1480	480
25.08.2007	100	83	2.5	-	11.8	3.1	1255	333
20.10.2007	100	88	2.1	-	15.3	4.2	1620	450
17.03.2008	100	87	2.3	-	14.7	3.0	1560	320

Table 1

MDA (1-3) of 1 ml serum was 0.5 nano mol/ml. We started a moderate zinc supplement in addition to a strong antioxidant (4-8) treatment. Beclomethasone dipropionate lotion was chosen for local use once a day.

The patient came back for an evaluation on 25th of August 2007. There was more than 90% improvement of

than the former appearance but lighter compared to the brown spots of vitiligo.

Patient was very happy and confident of his future. The laboratory tests showed a significant elevation of serum zinc levels and a modest rise of copper levels (Table 1 and Figure 3).



Figure 3: 20 October 2007

The patient was advised to continue with the same medications and the regime for the next two months.

His third visit was on 20th of October 2007. The most important development this time was the fact that vitiligo lesions of his chin, both commissures of the lips and the upper lip had recurred (Figure 3). Those lesions of the hands had also regained their whiteness of the first visit. He was conscious of this and was very unhappy. Upon further questioning we uncovered that he was not as

careful about taking his medications neither was he cautious about his diet. These changes and stressful environment that he had been living in during the last two months was accepted to be sufficient to explain recurrence of the disease symptoms under his stressful conditions.

His last visit was on the 24th of December 2007. He had been very careful about taking his medication and his diet, during the last two months. His moral was very good and much better compared to his former visit. The color of



Figure 4a: 24 December 2007



Figure 4b: 24 December 2007

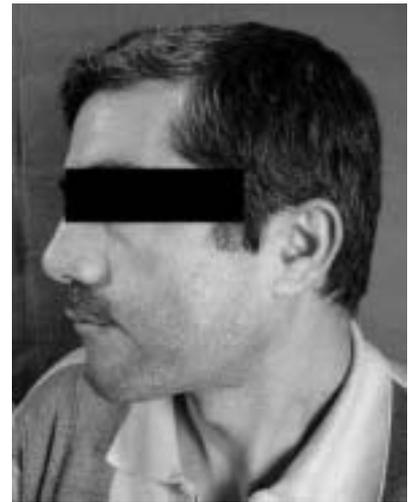


Figure 4c: 24 December 2007

his face appeared very close to normal, so that only two minor white dots were detectable at the right commissure of his mouth and one at the right side of chin (Figures 4a, 4b and 4c). All the other lesions had come extremely close to be undetectable.

Case 2

The patient (E.P.) was a 47 years old officer complaining of vitiligo, androgenic alopecia, migraine and aphthous stomatitis.

25 years ago while he was serving in the Turkish army and actually partaking in fighting against terrorists in the eastern part of the country, he felt for the first time an itching sensation at his forehead. This sensation lasted for three or four days and then disappeared. One year later and after his discharge from the army he noticed that at the same place of the itching sensation his skin had become whiter compared to his normal skin. During the following few weeks this lesion became brighter and enlarged in every direction. One week later he observed



Figure 5a: 31 August 2005



Figure 5b: 31 August 2005



Figure 6a: 06 October 2006



Figure 6b: 06 October 2006

Table 2

Parameters Date	S e r u m				10 ¹⁰ Erythrocytes		Tissue	
	Zinc (µg/dL)	Copper (µg/dL)	Magnesium (µg/dL)	MDA (nanomol/ml)	Zinc content (µg/dL)	Copper content (µg/dL)	Zinc (µg/dL)	Copper (µg/dL)
31.08.2005	70	93	2.3	1.0	16.1	2.3	1577	222
06.10.2005	80	87	2.3	1.0	15.1	2.7	1480	261
19.12.2005	86	106	2.3	1.0	17.5	3.6	1714	353
23.01.2006	100	109	3.0	1.0	13.1	4.4	1200	436

that small white spots of 1-3 mm in diameter had surrounded the original lesion. They also gradually enlarged. Finally the same lesions appeared at his face, became covered with white, light and dark brown lesions of vitiligo (Figures 5a and 5b). In the meantime his neck, forehead, eyelids, cheeks, abdomen, upper thighs, knees, anterior tibiae and dorsum of both feet gradually developed the same lesions (31.08.2005).

His physical examination was otherwise normal. Laboratory tests were carried out. Serum zinc and Copper levels were nearly 35 and 30% below normal values respectively while magnesium was normal (Table 2). Zinc content of 10¹⁰ red cells was 16.1 µg and copper content of the same number of erythrocytes was 2.3 µg (Table 2). Blood counts and urinalysis were within normal limits. Serum zinc, copper, magnesium levels were 70, 93 and 2.3 µg/dL respectively (6-8). MDA was 1,0 nano mol/ml of serum.

He was given a prescription for antioxidant medications (9-11) and was supported by the same kind of a diet.

The second visit was 2 months later, the patient felt more comfortable, his migraine this time was much better, the intensity of pain was much less and responded to an aspirine only. Frequency of occurrence of migraine attacks were 50% reduced. His biochemical parameters had improved as seen in Table 2. Serum zinc and copper levels had recovered moderately and magnesium was the same as before. The vitiligo lesions were hyperemic, especially of the forehead, eyelids and his face. His hands also had acquired a slightly hyperemic appearance

while the lesions at the lower extremities were practically unchanged.

His morals were much improved and he was happy about prognosis.

The third evaluation was done two months later. Vitiligo lesions at this occasion appeared much better. His face was over 90% improved (Figures 6a and 6b). His hands and fingers had improved nearly 50% while those of the lower extremities had improved only 20-30%.

The patient came to Anadolu Health and Research Foundation twice more. At each visit he appeared better, felt well and the tests supported his improved health. The last consultation was on the 23rd of January 2006. As can be appreciated from the photographs and the laboratory findings patient had returned very near to normal (Table 2).

Case 3

Y.T. was a 28 year old woman who came to our clinic on the 11th of March 2006 complaining of vitiligo, loss of hair, dystrophia of nails and acnea vulgaris, ease of fatigue and delayed healing of wounds. The patient however considered 'vitiligo' as her most important problem because the physician who had been treating her since along time had claimed that 'vitiligo' could not be 'cured'. The lesions of the disease started four years ago at the left shoulder (Figure 7). At the beginning it was a single oval lesion of nearly 1x2 cm in diameter which caused no trouble at all. Few weeks later similar lesions of few mm in diameter encircled this original lesion. The small white

Table 3

Parameters Date	S e r u m				10 ¹⁰ Erythrocytes		Tissue	
	Zinc (µg/dL)	Copper (µg/dL)	Magnesium (µg/dL)	MDA (nanomol/ml)	Zinc content (µg/dL)	Copper content (µg/dL)	Zinc (µg/dL)	Copper (µg/dL)
11.11.2006	83	91	1.5	1.5	14.8	1.4	1480	141
13.12.2006	109	100	2.1	1.0	14.3	3.5	1425	350

lesions gradually grew in all directions and seemed to be followed by other lesions of identical appearance.

Detailed personal and of the family history were not revealing. Routine physical examination did not uncover any pathological findings, outside of the vitiligo.

Patient was then given a prescription for antioxidant medications (12-14) and was advised a diet of the same kind of foods to be used for a month.

The second visit of the patient was on 13.12.2006. She felt much better and an estimated on over all improvement of nearly 80%. Laboratory findings confirmed these observations (Table 3).

She was advised the same medications and the regime with only minor alterations for the next two months. She applied the treatment and the regime faithfully but disregarded the control visits and claimed that

starting from two months after the last visit she was entirely free of signs and symptoms of the disease (Figure 8). She therefore considered the following ten months as a successfully spent period of evaluation of the new approach to vitiligo. She was very happy of the results.

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Figure 7



Figure 8

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