

Fatigue, Vitamin C and Chelation

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Introduction

According to a national governmental survey in 1981, fatigue was the single most common presenting complaint in medical practice. Specifically, approximately 15 million persons sought medical assistance with a primary complaint of tiredness. Causes of disease are often problems of metabolism which are expressed in different ways such as tiredness, exhaustion, fatigue. When the organism is in optimal condition, there is well-running digestion, excretion, respiration, locomotion, reproduction. All act harmoniously without pain but with pleasure, until metabolism is disturbed and there is a lack of homeostasis. This is usually the presenting finding. We have already made mention of this from Nedra Belloc's work with the Human Population Laboratories. It is interesting to note from her work that only about 5% of the population is endowed with good energy metabolism.

There are two studies to be examined here, one dealing with presumably healthy dentists; the other with ill patients with various and diverse chronic disorders.

Vitamin C and Fatigability

The vitamin C intake of 411 dentists and their wives was determined from the data on daily ascorbic acid consumption in a food frequency questionnaire.¹ The average number of fatigue symptoms listed in answers to the seven questions comprising Section I of the Cornell Medical Health Questionnaire (CMI) was designated the fatigability score. The relationship between the two variables was determined by calculating the fatigability score for different levels of vitamin C intake.

The 81 subjects who consumed less

than 100 mg of vitamin C per day reported a fatigability score averaging 0.81 ± 1.36 . Conversely, the 330 subjects consuming more than 400 mg of ascorbic acid per day reported a fatigability score averaging 0.41 ± 1.00 . In other words, roughly half the score of the first group. The mean difference was statistically significant ($t = 2.513$, $P < 0.025$). This negative correlation might prove useful as a factor in the early detection and prevention of ill health.

EDTA and Fatigue

This is also the story of 139 routinely studied patients with various and diverse chronic disorders, though principally cardiovascular.² These private practice participants sought medical attention, were not especially aware of tiredness as central to their presenting syndrome and in whom it was possible to quantify their initial fatigue findings and change in tiredness following EDTA (ethylenediaminetetraacetic acid) chelation therapy plus multivitamin/trace mineral supplementation.

The 139 patients (aged 63.0 ± 10.3 years) including 83 males (62.6 ± 10.6 years) and 56 females (63.5 ± 9.7 years) who participated in this study. At the initial visit, all patients completed the CMI. After a series of (on the average 26) three gram EDTA chelation infusions plus supportive multivitamin/trace mineral supplementation extending an average of 61.4 days, all patients once again completed the CMI. By this method, it was possible to quantify the initial fatigability scores (again using Section I of the CMI) and the changes following EDTA chelation Therapy (Table 1, p. 23).

The sample embraces a broad age spectrum ranging from the youngest at 34 years to the oldest at 82. It is also clear from Table 1 that the tiredness complaints range from 0 to 6 initially.

As noted in Table 1 that during this approximately two month period, those with

1. Note: This paper was accepted for publication prior to the author's death in August 2001. Correspondence: Park Tower, 904/906, 2717 Highland Ave. S., Birmingham, AL 35205-1725.

Table 1. Distribution of fatigability scores.

Fatigability Scores	Initial Scores	Final Scores (following EDTA)
0	44 (31.7%)	78 (56.1%)
1	25 (18.0%)	15 (10.8%)
2	24 (17.3%)	19 (13.6%)
3	23 (16.5%)	13 (9.4%)
4	13 (9.4%)	9 (6.5%)
5	8 (5.7%)	3 (2.2%)
6	2 (1.4%)	2 (1.4%)
Totals	139 (100%)	139 (100.0%)
Mean & S D.	1.77±1.64	1.12±1.54

Table 2. Summary of findings.

Sample size (total sample)	139
Initial findings	1.77 ± 1.64
Final findings	1.12 ± 1.53
Percentage change	-37
Significance of the differences of the means	t = 5.3052 P < 0.001
Sample size (symptomatic group)	95
Initial findings	2.59 ± 1.35
Final findings	1.58 ± 1.65
Percentage change	-39
Significance of the differences of the means	t =6.1771 P < 0.001*

*Statistically significant difference of the means

no exhaustion findings rose from 31.7% to 56.1%, an increase of about 25%. It is further evident from Table 1 and underscored in Table 2 (above) that the mean exhaustion score decreased from 1.77 to 1.12, specifically a decline of 37%. One will note that 44 of the subjects (Table 1) did not initially report fatigability. Clearly, therefore, no improvement could be possible in this sub-

set. Hence, the change in fatigability was recalculated for the 95 individuals who reported one or more complaints initially (Table 2). In this symptomatic group, the average declined from 2.59 to 1.58, an improvement of 39%!

As far as we can ascertain, there has been little, if any, serious effort to quantitate the clinical presence and course

of this very common complaint. There has been absolutely no information about the fatigability syndrome in subjects before and after EDTA chelation therapy. Within the limits of this simple experiment, the evidence suggests a statistically significant reduction of exhaustion in addition to whatever was the primary reason for seeking medical assistance.

It is, of course, possible (though highly improbable) that these exciting salutary benefits are accidental or psychological since a control group could not be included. It should be underlined that this experiment was conducted in a private practice environment with very ill patients. A placebo subset would have been morally wrong and clinically dangerous. Additionally, it is important to mention that, because of the leaching effect of EDTA chelation, it is imperative that there be a multi-vitamin/trace mineral supplementation program. This then raises the obvious question as to the relative contributions of the EDTA versus the vitamins/minerals. This report, for the reasons given earlier, does not address itself to this question. Nonetheless, it is fascinating to report the changes observed in this very ill private practice group under the cited conditions.

Summary and Conclusions

Of the many clinical aspects in health and disease, fatigue plays an important and possibly deciding part. It is in fact the demarcating line between health and sickness though obviously many other findings may play a role. In a small survey of allegedly healthy dentists, we have shown that the number of complaints are halved in those consuming the greater amounts of vitamin C. Hence, here is evidence of a host resistance agent.

It is also fascinating to report the changes observed in a very ill private practice group before and after EDTA chelation. Increasing attention is being given to the biochemical and physiologic parameters

and their alterations with EDTA. This was an attempt to raise and hopefully answer the question regarding the effect of this form of therapy upon North America's number one clinical complaint. Here is another challenge to homeostasis.

References

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