Some Aspects of Our Research Studies on Schizophrenia

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Approximately two years ago, we reported that the administration of levodopa to schizophrenic patients with drug-induced Parkinsonism, aggravated their mental status. Later on, we observed the onset of psychiatric symptoms in Parkinson patients treated with levodopa. Other investigators also observed a high incidence of psychiatric symptoms in Parkinson patients who were on levodopa therapy, implicating a toxic effect.

However, admitting the fact that levodopa is a drug when given as a medication, hereby, liable of causing side effects, we must remember that it is normally found in the human body constituting one step in the cathecholamine pathway, whose end results are the formation of noradrenaline and adrenaline.

Therefore, we felt it feasible that the causation of psychiatric symptoms could be due to the formation of an aberrant metabolite of the cathecholamine synthesis rather than to a toxic effect. To prove our theory, we administered levodopa to well-compensated schizophrenic patients and all of them deteriorated without symptoms of toxicity.

At this point, a second question was asked: if this aberrant metabolite exists and if it is a methylated compound, will nicotinic acid—a methyl acceptor—interact with this theoretical substance? We had some experience on levodopa-nicotinic acid interaction in animal experimentation.

The administration of nicotinic acid prevents the formation of stress-induced ulcers in restraint rats, whereas the administration of levodopa to rats produced gastric ulcers under similar situations. Without restraint, the administration of levodopa caused petechiae and bleeding of the gastric mucosa, which were prevented if nicotinic acid was previously given. It was then, that we decided to administer levodopa and nicotinic acid to schizophrenic patients.

So far, our results indicate that some target psychiatric symptoms caused by levodopa can be blocked by the addition of nicotinic acid.

These findings prompt us to suggest once again that levodopa might be an important link in the etiology of some forms of mental illness still called schizophrenia. Secondly, that nicotinic acid has anti-stressing properties and blocks some types of levodopa psychiatric effects.

Obviously, these are just preliminary findings and further investigation is required. However, the work of those who have preceded us and our own work lead us to believe that the lack of knowledge in Orthomolecular psychiatry is slowly being filled.