

# Clinical Responses with Vitamin B<sub>3</sub>: Report of Two Cases of Schizophrenia

Ratan Singh, Ph.D.<sup>1</sup>

<sup>1</sup>Consultant in Nutritional and Clinical Psychology, Jaipur Hospital, India. Email: ratanpsych@hotmail.com

**Abstract** Two cases of schizophrenia are reported. In case #1, the patient quickly stabilized after taking large doses of niacin. As a result of side effects, the patient discontinued niacin and rapidly regressed. When this patient resumed niacin for approximately 1 year, he normalized and did not require the vitamin any longer. In case #2, the patient stabilized quickly from large doses of niacinamide, but discontinued due to vomiting. This patient became fearful of niacinamide's side effects and went on antipsychotic medication, but unfortunately his level of functionality declined. Both cases highlight the rapidity of therapeutic responses that are possible when niacin or niacinamide are given to atypical antipsychotic-naïve schizophrenic patients. Given the track record and low cost of vitamin B<sub>3</sub> vitamin supplementation, having few worrisome side effects and good recovery rates, there is an urgent need to promote orthomolecular medicine in India.

## Introduction

The idea that high doses of niacin or niacinamide could act quickly to stabilize schizophrenic patients occurred to me upon reading Hoffer's interview in which he described immediate amelioration of auditory hallucinations in a female schizophrenic patient that consumed 60 grams (g) of niacin in one day.<sup>1</sup> Here, I report on two schizophrenic cases. The patient in Case #1 consulted me once, and then moved to another city over 1,000 kilometres away. In this case, the patient took high doses of niacin himself, and much like the case that Hoffer reported, had a favourable therapeutic outcome.<sup>1</sup>

The patient in Case #2 consulted me for a few days and also moved to another city. Even though this patient experienced some notable and fairly immediate improvements from niacinamide, his outcome was poor since he discontinued the vitamin and went on antipsychotic medication.

## Case #1

J, male, 18 years of age, consulted with me in the hospital. His father accompanied him since J was unmanageable, violent, and aggressive. J was paranoid, believing that his mother was purposely disrupting his plan to pass the Indian Institute of Technology (IIT) entrance exam. He had broken a window, cut his wrist with a broken piece of glass, and had written a letter in his blood in which he described murdering his mother because she sent him running errands which was distracting him from his studies. According to J's father, he was not really studying. J would just make plans, buy books, and photocopy several pages to be read later which he would never do. He could hardly sit at his desk to study. At night, he would try to study but dozed off intermittently. J was living with his father in a city thousands of kilometres from his mother, in order to get away from her alleged disruptions. J needed to move back to where his mother lived since he was to appear in class 12 exams in that city. Although

his father had promised to keep him in a hotel and away from his mother, J didn't believe his father.

I advised J to take 1 g of niacin, three times daily. I also added that it would give him a cutaneous flush, which is a good sign of blood flowing to the remote areas of the brain, and that it would increase his focus and sharpen his mind. J liked it and cooperated—rather over-cooperated—because he wished to increase his brain power to pass the IIT entrance exam. His father purchased 100 g of niacin to test over time, and intended to buy more if J's response was good.

Upon reaching the city where his mother lived, J was given his first dose, 1 g of niacin. The next morning, the dose was increased to 5 g, and another 5 g was given in the late evening because the expected cutaneous flush did not happen. In the morning of the third day, J packed his bag, took the niacin bottle, and barged out of the house without a word to anyone. His parents became extremely worried. In a panic, J's father made a long distance call to me. I was also worried given J's history of paranoia and aggression. Therefore, I advised J's father to report the matter to police and take his son to a psychiatrist when he was found. All of us were relieved when J on his own called his father in the evening and explained that he was staying in the hotel just opposite his mother's house. J's father asked if he was taking niacin, and if he had experienced the cutaneous flush. J denied having had any cutaneous flush. That night, desperate to pass the IIT entrance exam, J took 8 g of niacin as single dose. He had a deep uninterrupted sleep of eight hours that night. The next morning, J's father went to the hotel. J was much better. He was obedient, calm, went home to his mother, and then greeted her in the typical Indian style. J requested that she provide some drink and breakfast, and even asked for permission to watch television. He watched television for four hours, and studied as well.

Unfortunately, J was unable to remain on his current dose of niacin (8 g twice daily) since he developed severe problems in his eyes. He reported that his eyes were burn-

ing, that white fluid was oozing out, and that he could not open them. Fearing that niacin would turn him blind, J and his family decided to stop niacin. His father called me, and I advised him to take his son to an ophthalmologist. His eyes had started recovering when niacin was discontinued, and they didn't need to see any doctor. (Editor's note: Niacin has never been shown to cause blindness. Infrequently, niacin can cause blurred vision due to cystoid macular edema, which is completely reversible when the vitamin is discontinued).

Shortly thereafter, his father called me and complained that J was relapsing, gradually getting aggressive, and unmanageable again. Once again, J fled his home to live in a hotel. The next day the hotel manager called J's father and complained that J was opening his shirt, disturbing the hotel guests, and going to the rooftop. He would also walk until late in the night without any shirt or trouser. The hotel manager requested that J's father get his son, or the hotel staff would forcibly throw him out.

J's father called me, and asked if he could restart his son on niacin mixed in yogurt because J refused to take niacin for fear of going blind. Because J liked yogurt, his father opted to hide the niacin in it. At this point J was not eating and was aggressive and stubbornly negative. So, I encouraged the mixing of niacin and yogurt, but added that this time J's father should give measured amounts of niacin, increasing it slowly from 1g three times daily until a cutaneous flush happens, and then to remain on that dose for several days before consulting me about the next steps. J used 100 g of niacin over the course of a year and stopped since he became normal. J was now taking private coaching to prepare for the IIT entrance exam, and was also getting a helping hand from a student at IIT. J was a changed person, calmly adjusting with his mother and studying for the exam.

## Case #2

V, a recently graduated medical doctor, was accompanied by his caregiver when he consulted me in early April 2010. V and his

caregiver were living away from home, preparing for examinations with the hope of further study and training overseas. Apparently, V became aloof, too serious, reticent, and stopped eating and taking care of his hygiene. He also reported to his caregiver that some people were following him, were tinkering with his motorbike, or that some people had secretly planted microphones inside his helmet to keep track of their conversations. His sleep was disturbed such that his sleep-wake cycle was reversed. When V tried to sleep in the night, he would wake up at 2 AM, and was then unable to sleep thereafter.

I observed that V's gait was wobbly and unstable. I gave him 125 mg niacinamide (I didn't have niacin in stock that day) in juice and waited for 10 minutes to see if there was nausea and vomiting. When no nausea occurred, I gave him 1 g niacinamide in juice. In 5-10 minutes there was a visible change. His posture softened in the sofa and V gave a relaxed smile. His gloomy face, poor eye contact, and difficulty conversing had vanished. I provided instructions to the caregiver and both of them left to find a hotel since they had come from another city to consult with me. His caregiver said he was seeing a smile on V's face for the first time in weeks. I requested that the dose of niacinamide be slowly increased to the point of nausea. My aim was to settle on a dose just below the nausea-inducing amount. That night, V took his meal and slept peacefully. Seeing an improvement, the caregiver provided 2 g of niacinamide the next morning. Unfortunately, V vomited and I instructed him to temporarily stop the niacinamide. It was stopped for a day pending the results of liver function tests. The enzymes were raised, double their normal values. V regressed to being gloomy, shut-in, aloof, not willing to talk, and confined to bed due to feeling weak. His sleep became disturbed again and he tossed the whole night.

As a result of V's destabilization, I restarted the niacinamide and some other vitamins. V was instructed to take 500 mg of niacinamide in morning and afternoon, and 1

g at night with some juice. He vomited once, and then developed a mild fever and diarrhoea. These physical symptoms were easily controlled in two days with an oral isotonic rehydration drink and probiotics. The following day V stabilized on 1 g niacinamide three times daily in capsules. Capsules were used instead of tablets since juice was unable to hide the bitter taste of niacinamide tablets. V stabilized on 1 g 3 times daily of niacinamide and traveled to another city to prepare for his exams.

On April 30, 2010, V's caregiver sent me an email. "After today morning's episode (where he did not take any other medications other than niacinamide due to intense sleep) V has asked me to just bring all the medication (that is, vitamins) to him and he would decide the serial order of taking them. We tried this in the late afternoon and he took all his medicines on his own. I encouraged him for that. This means very soon he will be observing his regimen on his own. I am very happy for him about it. He described that he is for the first time experiencing his body properly and is getting a general feeling of as-if-he-were-coming-out-of-some-illness and associated weakness. He has stayed awake for the longest time in the last seven days today (about hours hours at a stretch and about six hours in all by now)."

At this stage, I also prescribed 5-hydroxytryptophan (5-HTP) for V's sleep problems, but he vomited. I am uncertain if the vomiting was due to the 5-HTP or niacinamide, or both. As a result of the vomiting, V and his caregiver panicked and stopped all the vitamins and 5-HTP. The two of them were now fearful of the consequences of vomiting, and started intravenous rehydration fluid. V's caregiver reported: "Presently V is reporting some fear and suspicion but he is not getting excited due to that. He is just reporting that those (paranoid) thoughts are coming more easily in his mind than before."

Since V and his caregiver were afraid, they traveled back to V's parental home. When they reached home, they were warned that vitamins cause central nervous sys-

tem toxicity by a family friend, a professor of medicine. V was promptly referred to a psychiatrist and subsequently prescribed antipsychotic medication. In an email correspondence from his caregiver, V apparently developed extra-pyramidal symptoms, gait difficulties, and has gradually worsened since stopping the niacinamide and 5-HTP. V also had a return of psychotic symptoms that were much worse than when he first presented to my office. His caregiver reported increased symptoms of schizophrenia, including paranoid ideation (i.e., being monitored by some agency all the time), self-talking, being more guarded, agitation, singing to himself, confining himself to his room, poor hygiene, and having no insight into his condition.

## Discussion

In case #1, the pre-niacin baseline stage when J first came to me, can be labelled as “A.” The “B” stage was when J had an immediate recovery after his deep and uninterrupted sleep following the high-dose niacin consumption. This was followed by another “A” stage since J regressed from stopping the niacin because of eye problems. Thus, in a way J’s case followed an ABA design.<sup>2</sup> It was these events that enabled J’s father to clearly observe that niacin, and not some other factor, had helped his son.

Why did J not require niacin after the 100 g was consumed? This was likely a case of early psychosis and was therefore more treatable with niacin since the patient was not on prior psychiatric medication, nor did the patient have a long protracted course of mental illness. J might have had a niacin deficiency, and not a dependency, and therefore would not necessarily require niacin for the remainder of his life. J was also receiving quality psychosocial support from his parents, and later on from a student already attending the IIT. The effectiveness of psychosocial support in mental illness cannot be understated. Hoffer described the outcomes by the Quakers’ psychosocial treatments over 150 years ago with a reported 50 percent recovery rate – far better than the present day recovery rates from psychiatric medications.<sup>3</sup>

Clearly, with the disruptive behaviours gone, J’s pleasant adaptive behaviours emerged, which were being sustained by positive psychosocial influences in his environment. Moreover, J was now eating regular meals, such that, whatever little amounts of niacin he might be getting in foods was sufficient for him.

In Case #2, I had no follow-up with V or his caregiver since May 2010, but did hear about V some 11 months later from a mutual acquaintance. She informed me that V was having side effects caused by the antipsychotic medication given to him and was still not well. Thus, the outcome was not satisfactory in this case for obvious reasons. Unfortunately, V was unable to continue the niacinamide and 5-HTP due to vomiting. V’s case highlights the potential benefits from niacinamide, and how atypical antipsychotic medication can sometimes make patients worse and less functional than they were prior to medication.

Both cases highlight the rapidity of therapeutic responses that are possible when niacin or niacinamide are given to atypical antipsychotic-naïve schizophrenic patients. Hoffer reported that vitamin B<sub>3</sub> is more effective when administered to patients not on atypical antipsychotic medications since this class of medication prevents vitamin B<sub>3</sub>’s therapeutic effects.<sup>4</sup> Hoffer also reported quicker therapeutic responses to vitamin B<sub>3</sub> when it is given early in a patient’s course of schizophrenia.<sup>5</sup> Both patients were not on any atypical antipsychotic medication when they were under my care, and both patients presented early in the course of their mental illness.

I certainly don’t intend to imply that all cases of schizophrenia will respond quickly to niacin or niacinamide as these patients did. I have had other cases of paranoid schizophrenia, for example, that responded within 2 weeks to a gluten free diet. There are many additional orthomolecular treatments of value if needed.<sup>6,7</sup>

In a continent like India where the majority of individuals would be unable to afford and/or access standard psychiatric care, orthomolecular medicine is very much

needed and it is not cost-prohibitive. India's population is 1.119 billion, next to China with population of 1.337 billion.<sup>8</sup> In India, an estimated 22% of individuals will develop one or more mental or behavioural disorders in their lifetime.<sup>9</sup> There are approximately 3.5 psychiatrists for every one million persons in India.<sup>10</sup> Nearly all psychiatrists are based in the cities, yet 75% of the population live in villages and have little-to-no access to standard psychiatric medical care. Psychiatrists in India use the full range of psychotropic drugs with their typical side effects. Complementary and alternative medical providers, such as naturopathic practitioners, Ayurvedic and homoeopathic physicians, and nutritionists are seldom aware of the possibility of treating the mentally ill with orthomolecular medicine, and their focus is on general practice. The non-governmental organizations working for the mentally ill in India focus on psychosocial support, and employ the services of psychiatrists when needed. In the majority of cases, the preferred method of treatment is faith healing.<sup>11</sup> Even exorcism is used as a treatment on mental health patients.<sup>12</sup> There are less than a handful of orthomolecular practitioners in India: two are clinical psychologists (including me), and one is a psychiatrist who focuses his clinical practice on pervasive developmental disorders. Given the track record, easy access to vitamin supplementation, affordability, safety, and good recovery rates afforded by orthomolecular medicine, especially when combined with adequate psychosocial supports, there is an urgent need to promote this therapy in India.

### Statement of Informed Consent

Verbal consent was provided for publication of case #1. Consent was not obtained for publication of case #2 since the author lost contact with the patient and his caregiver. The editor provides his assurance that all identifying characteristics have been altered to protect patient anonymity, but, while doing so, care has been taken not to affect the technical aspects of this article.

### Competing Interests

The author declares that he has no competing interests.

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