Lysine, Herpes, Schizophrenia and MCTD

A Confirmation of the Viral Theory of Schizophrenia from a Longitudinal Study

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Abstract

This is a report of the highlights of a 26-year longitudinal study of schizophrenia which covers over 50 years of information about the principal subject, a male schizophrenic, who had been hospitalized for2[1]/2 years after service in the army. Records were located of a relative who died of TB in a state hospital who had a similar psychiatric history after service in World War I. Along with this information was found a greater than normal incidence of lupus erythematosus in the extended family. The observer reports that certain periods of accelerated growth seem to promote schizophrenia and lupus, in genetically disposed individuals, before the eruption of the third molars between ages 15-30 when a decline in the activity of the thymus gland is part of the maturation process (schizophrenia) and during the peak estrogen periods of a woman's life (lupus) due to a growth factor operative in that hormone. These periods of accelerated growth and/or decline in activity of the thymus gland are associated with the accompanying stimulation of activity of the essential reproductive portions of a presumed latent intracellular herpes virus by means of an altered balance of arginine and lysine amino acids in the membrane of nerve cells. In schizophrenia this is believed to take place in the brain and symptoms of this disorder are the result of the body's attempt to control the virus. Lupus erythematosus and schizophrenia are compared. One of the siblings of the schizophrenic is a female who was thought to be a histadelic with suicidal depression and multiple allergies in her history, who was later correctly diagnosed as having Mixed Connective Tissue Disease. Three hives or bumps behind the left ear of this subject, suspected of being herpes-affected ganglia, led to the trial of l-lysine on a maintenance basis by the two siblings. Both experienced remarkable improvement in schizophrenic symptoms and Raynaud's phenomenon (associated with the lupus-like disorder), respectively. A reverse trial brought about return of the white fingers. Eating of corn, a known allergen, brought about a worsening of the schizophrenia. Various factors believed to be influential in the two disorders are discussed. There is a tentative conclusion that the etiologies and mechanisms of lupus and some schizophrenias are similar. Question: Is schizophrenia lupus erythematosus?

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February, 1959, was the beginning of a longitudinal study of schizophrenia based on the experiences of two siblings, one a 56-year-old typical schizophrenic male and the other a 62-year-old female histadelic, who was later correctly diagnosed as having Mixed Connective Tissue Disease, a lupus-like disorder.

After 26 years of collecting data and keeping up with developments in the field, the conclusion is, at this writing, May, 1985, that the so-called schizophrenias described in this paper are a hereditary metabolic disorder with viral connections involving the basic growth processes in the body.

A working hypothesis was arrived at in 1959 with the help of the book by de Ropp, *Drugs and the Mind* (1957), after subject No. 1 (the male) had been hospitalized for two years. He was advised by letter to avoid certain items of diet. His condition improved and he was released in six months.

Not much progress was made for many years after that, because several pieces of the puzzle were missing. The institutionalized male had returned from the veterans' hospital at age 30 with the prognosis that he had reached a plateau in his recovery and that his condition was expected to be chronic. Supportive treatment in the form of supplements was given, but megavitamin treatment was not used because of lack of medical supervision. A family friend, a psychiatrist, recommended to the family that because there was no cure for schizophrenia, further psychiatric consultation was futile. This was based on his opinion that the psychiatrists at the hospital were competent and that their advice was reliable.

L-Lysine Maintenance Trial

In June, 1983, a supply of l-lysine monohydrochloride was purchased and an informal trial was begun by subject No. 1, the male schizophrenic, and subject No. 2, the female histadelic, who had a period of suicidal depression in her medical history at age 36. Subject No. 1 had had only rare hallucinatory episodes, usually after fasting (Pearson, p. 229) during the 25 years living with his parents. He had been sent home from the hospital with a supply of Thorazine which was used on these occasions.

Subject No. 1 took one 500 mg tablet of 1-lysine every other day for two weeks, during which time there was a remarkable change in personality, the subject becoming more outgoing and sociable. He wrote a series of letters to the observer, an event which in itself was remarkable, indicating a drastic change, for some unknown reason, at this point.

Over a period of several weeks the letters kept coming, but a sudden change in mental state of the writer was noted in letters No. 4 and 5 with increasing illogical outbursts, comparable to brain seizures, identified in the content. There was a change in handwriting on the envelopes, getting progressively worse, almost to the point of illegibility. The writer told about beginning to harvest corn from a backyard garden, and as the harvest progressed the letters were more indicative of a cerebral allergy to corn. *Dr. Mandell's 5-Day Allergy Relief System* had been read by the observer so there was awareness of this phenomenon, cerebral allergy.

Back in 1959, in order to help the patient enough to get him released from the hospital, dietary recommendations were sent to him by letter, based on the idea that his brain was allergic tissue and there were items in his diet which were allergens. This was arrived at because there was no pattern of pathology known in the family except that of immune system problems in the children of subject No. 2, which surfaced during teething periods preceded by a viral infection or associated with polio vaccination. It was suggested that he stay away from chocolate, coffee, tea and cola and limit his consumption of sugar. The only known allergen in the family at this time was chocolate, based on subject No. 2's severe reaction to this item as a child, so it was really only suspected in 1959. When, in 1983, subject No. 1 demonstrated in the letters a cerebral allergy to corn, the suspicion that this was an immune system problem was further strengthened.

Because there had been such a definite noticeable improvement in the subject's sociability and evenness of temper before the corn harvests, he was questioned as to what he had taken in the way of vitamins or supplements. He said that for two weeks he had been taking one 500 mg tablet of 1-lysine every other day. The trial was not begun with any expectation of success and the results were a great surprise. The change was further substantiated by two relatives who were not aware of the trial and commented on the improvement voluntarily.

He increased his intake to one tablet of 500 mg 1-lysine every day. Changes were in the ability to interact in a more normal manner, appearing more at ease, with no darting eye movements and only rare monologue-type stream of consciousness conversations. He has, since his improvement, purchased a newer used car and taken disco dancing lessons at the YWCA. This person had not made a successful work adjustment after an honorable discharge from the army at age 28. Several attempts at holding a job, after the hospitalization, ended with disability due to hyperactivity.

The limit of his ability was driving and maintaining a car, but he preferred not to drive while alone. The onset of his schizophrenia occurred when he was out-of-town and in traffic. This aspect of driving alone showed improvement also. Memory was a major problem. Long term memory improvement was noted but short term memory improvement is questionable, so results may be described as spotty but nevertheless most noteworthy, because this is the first improvement in 25 years from the use of any of the various supplements which had been tried in all that time. Vitamin B-6 made him look haggard if taken in large doses. He was thin, although he ate a lot of food which seemed to pass rapidly through his digestive system. Niacin, B complex, vitamin C and dolomite were the most consistently used nutritional supports.

The l-lysine supplementation was tried because of advertisements for supplements in which success against Herpes Simplex Virus was reported, based on the work of Kagan, Griffith and Norins. Subject No. 2, the former histadelic, had noted three small hard bumps, like hives or shot, behind the left ear during the severe phase of her illness in 1959, and these were suspected of being swollen ganglia due to herpes virus. Subject No. 2, in 1983, took one 500 mg tablet of 1-lysine on a maintenance basis, one every week or ten days or whenever a bump or bleeb would show up behind the ear.

The trial, for both subjects, started some time after June, 1983. That winter, subject No. 2 was much surprised to see that the Raynaud's phenomenon of 24 years' duration was practically gone, with some splotchiness of the fingers noted, hardly distinguishable. The second winter it was entirely gone.

A reverse trial was initiated before the end of the second winter by subject No. 2. Only one tablet of 500 mg 1-lysine was taken in one month's time after which the index finger on the left hand showed an inch of whiteness the first week in March, 1985, when the subject was on the way to the doctor's office in a cold wind, indicating that 1-lysine was highly likely the cause of the initial improvement. The subject was having a recurrence of allergy, a perennial problem, this time a surprise seafood allergy. A relapse is also noted in Herpes Simplex I victims in four weeks after withdrawal of lysine supplementation.

The previous May (1984) she had had a course of erythromycin for chest congestion from sinus infection, the first antibiotic in 27 years. This was poorly tolerated and had to be reduced to half doses. Aftereffects lingered. Eating a small amount of corn made the infection worse. In October of that year a trip to Florida and exposure to the sun for a few days on the beach resulted in a recurrence of esophageal spasms which lasted seven weeks. These are typical of scleroderma and had been experienced before, part of Mixed Connective Tissue Disease which was diagnosed in 1984.

The Indiana Lupus Foundation had been promoting the education of the public about lupus erythematosus and the subject, who was considered a histadelic for 24 years (Fig. 1), finally obtained a correct diagnosis with the help of Dr. Freeman's book, *Arthritis: The New Treatments* (1979). Her physician concurred with the diagnosis because it is very difficult for a physician, alone, to diagnose lupus and lupus-type diseases, and the tests available at present are not very definitive. The lupus panel test results were negative. Profiles vary a lot and a person may have lupus with four or more of the necessary symptoms listed by the American Rheumatism Association for an official diagnosis, or one may have lupus and have only one or two, or perhaps none of them. A description of lupus erythematosus and schizophrenia, also functions of the immune system and the thymus gland have been omitted in this paper due to lack of space.

During the period prior to the withdrawal of the lysine supplements, subject No. 2 had increased her consumption of coffee to three cups for breakfast even though about $^{1}/4$ cup is her maximum tolerance. She also ate considerable corn which is known to be an allergen in at least four members of her extended family. But in spite of the erythromycin, the exposure to the sun, the increase in coffee consumption and the eating of corn products,

the Raynaud's phenomenon did not reappear until l-lysine was diminished.

Similarities between Schizophrenia and Lupus and/or MCTD

During these trials much genealogical information was being gathered about this family, and quite by coincidence much pertinent medical information was uncovered. The first item was a great-uncle's death certificate which showed the cause of death as mitral insufficiency, chronic myocarditis and chronic interstitial nephritis. This is a typical profile of death from complications of lupus erythematosus. The second case was intestinal perforation, a rather uncommon cause of death, but also associated with lupus. Three people died shortly after surgery and it is known that lupus people are at slightly greater risk from surgery. (Aladjem, (1), p. 86)

The causes of death for those dying before the age of 70 were compiled for the members of this particular family line, the mother's father's family. Most of the deaths could be linked to lupus or its variations. The overall incidence in the various families and generations, people now living and those dying before and after age 70, averaged an unbelievable 50%. The incidence of lupus reported in the literature is 1 member out of 20 in a lupus-affected family. Unless one is familiar with the ramifications of lupus and its fatal complications, the common element on death reports may very easily be overlooked. Lupus erythematosus per se was not listed as a cause of death on any of the death reports pertaining to this family.

Among the living members of the family there are known to be two male first cousins with very red complexions, one young female with Raynaud's phenomenon, one with cervical dysplasia and a third cousin with scleroderma. One of the dead was a first-cousin-once-removed with dementia praecox who died of pulmonary tuberculosis in 1924 in a state hospital after service in World War I. There was no other pattern of pathology in this family line. In the other three family lines there was one family with a greater than normal incidence of heart disease among the middle-aged males. This was also on the mother's side of the family. The other two lines had no pattern of pathology that was apparent. The incidence of lupus was not readily identified in the direct line of descent but in lateral branches, cousins, aunts and great-uncle. For this reason it took quite a bit of time to discover. At first it was thought that this heavy incidence in the one family was due to inbreeding, but further research found that it is thought to be X-linked dominant. (Blau, p. 69).

Question: Are the two cases of schizophrenia (one described in 1924 as dementia praecox) in the family line with an overwhelming number of lupus and lupus-related cases the same disease or a different disease? Uterine cancer cases were included in the lupus classification because females with lupus have an abnormal metabolism of female hormone and there was a definite pattern of uterine and cervical pathology; no breast cancer or other sites were involved.

In the case of subject No. 2, it was 24 years before a change of diagnosis from histadelic schizophrenia to MCTD was made by the subject herself and agreed to by her physician with the help of the book by Dr. Julian Freeman. Pages 108 to 118 provided an excellent description of Mixed Connective Tissue Disease but without the emphasis on suicidal depression. Emotional or mental effects may occur in one in four cases of the regular kind of lupus as distinguished from the drug-induced variety (Blau, p. 16). Psychosis and depression are known to accompany lupus, so the depression may very well have been part of the Systemic Lupus Erythematosus (SLE) portion of this syndrome which is considered a lupus-like disease in which many of the elements of lupus are present, for example, the sensitivity to sunlight which is present in some but not all cases. Subject No. 1 has an ink-blot shaped bluish-red mark on the back of his neck. Subject No. 2 has a neck which looks as if it is sunburned. Lupus is usually associated with a red facial rash over the nose and cheeks, but only 50% or fewer of the cases have this. The different profiles and the variety and inconsistency of symptoms make diagnosis very difficult for a physician, especially for this lupus-like disease

also called Sharp's Syndrome and easily confused with overlap syndrome.

In an article by Jane Stegemiller in the *Indianapolis News* of Friday, Oct. 15, 1982, the following problems are listed, among 24, as possible in SLE: Seizures, manic-depressive disorder, schizophrenia, delusions, auditory or visual hallucinations, paranoia, severe depression, memory loss, as well as diminished appetite and weight loss, spasms of blood vessels in fingers and toes and false positive results on a syphilis test. Some lists have 60 items.

A hair analysis for subject No. 1, done in May, 1981, showed a 0 reading for lithium, indicating manic-depression. Because there was little doubt that the subject was a classic case of schizophrenia with symptoms including hallucinations, inability to interact socially, insomnia, religiosity, scrupulosity, with paranoia and catatonia, in addition, during the acute stage while hospitalized, it was difficult to reconcile this manic-depression diagnosis with the known diagnosis of schizophrenia which was made by psychiatrists at the VA hospital. The first doubts about this being a clear-cut case were entertained at this time.

The histadelic schizophrenic, subject No. 2, was first alerted to an unusual medical problem when a false positive Wasser-mann was discovered at the beginning of pregnancy No. 2 out of 3 at age 33. The pregnancy was followed by a period of postpartum depression and myositis in the back muscles. The pregnancy had been preceded by a series of intestinal flu-type virus infections. Only the pregnancy preceded by virus infection was followed by depression.

The severe suicidal depression of subject No. 2 took place after a prolonged bout with intestinal flu at age 36 after three pregnancies. She had to take to bed for two days for complete rest on orders from the physician. The treatment also consisted of two courses of medication. The hard-to-shake viral infection followed the ingestion of chocolate to which the subject was known to be sensitive from age 10 or 11. It is known that chocolate, nuts, seeds and some cereals have a negative influence when there is an arginine/lysine imbalance which promotes Herpes Simplex Virus No. 1 in cold sore victims. The trauma involved was listening at night for a change in the breathing of her child with asthmatic bronchitis.

The Arginine/Lysine Imbalance

Many believe that the biochemical abnormality of depression or mania lies in *some small irregularity in the membrane of nerve cells.* (Alper, p. 72)

Cell membranes are made up of molecules which contain the amino acids arginine and lysine, among others (Orten, p. 18).

"Several clinical studies have been performed using lysine as a treatment for the herpes virus. The rationale for lysine therapy is based upon the fact that tissue replication of the herpes virus is enhanced when the amino acid ratio of arginine to lysine favors arginine. (Both are amino acids that are components of a protein structure.) The protein layer around the host cell is made up of more lysine than arginine; the opposite is true with the herpes virus cell, which is more arginine than lysine. Because increased dietary lysine causes decreased gastrointestinal absorption and decreased kidney resorption of arginine, lysine is thought to be detrimental to the herpes virus by depriving it of arginine." (Perlow, p. 59)

On page 83 *of Food and Your Well-Being* by Labuza a chart shows that arginine is required only for infants and that lysine is one of the essential amino acids. On p. 522-23 *of Human Biochemistry* (Orten and Neuhaus) similar information can be found.

A quotation from this latter book, p. 351, on this subject: "Arginine is considered to be a semi-essential amino acid. It can be synthesized in animal tissues at a rate sufficient for maintenance in the adult but not rapidly enough to support growth in the young animal. It is thus an essential amino acid for growth but not for maintenance."

On p. 315, same book: "Since a large number of enzymatically catalyzed reactions are involved in the metabolism of typical amino acids, there are an equal number of possibilities of inherited disorders of amino acid metabolism. These

may be *direct* because of a single hereditary enzyme deficiency affecting the metabolism or transport of an amino acid. As a result, an increase in the plasma level and urinary excretion (aminoaciduria) of the amino acid or of one of its metabolites, depending on the site of the deficiency, can occur. Disorders of amino acid metabolism also may be *secondary* (or "indirect") because of some other disease process, e.g., in the liver or kidney, impairing metabolism. Secondary disorders are either hereditary or acquired."

On p. 485, in regard to absorption of amino acids from the small intestine: "Several amino acids appear to share the same transport protein, e.g., one transport protein for the basic amino acids arginine and lysine and a different one for the acidic amino acids glutamic and aspartic. Evidence for this fact is that added lysine inhibits the absorption of arginine, indicating competition for the binding site on the transport protein."

Evidence of Allergy

In the book, *The Type 1/Type 2 Allergy Relief Program* by Levin and Zellerbach, a distinction is made between the allergic reactions such as hives and asthma (type
1) and systemic and cerebral reactions (type
2) such as psychosis, depression, thyroid malfunction and chemical taste in the mouth, a concept which is not universally accepted by allergists.

The items to which various members of this family are sensitive (almost exclusively type 2 reactions) form a pattern. The common items known to date for the two siblings in this study are: some anesthetics, sunlight, chocolate, corn and greens in the spring (dandelion and beet). The worst hallucinatory episode in 25 years occurred in subject No. l's experience after extensive dental work in which considerable Xylocaine or one of the 'caines was used. The event occurred so long after the dental work was completed that it would be hard to connect the two events unless one were alert to the possibility of a delayed reaction. It was about thirty days later. Thirty days seems to be a key time period in this longitudinal study. A longitudinal study has the advantage over clinical or laboratory studies when the element of time is involved. Subject No. 2 (the female) had the following experience with this dental anesthetic:

On May 25, 1982, her dentist insisted on a test of the local anesthetic. He dabbed a small amount on the tip of her tongue and this resulted in the expected numbness. The first day following there were pains in the chest; the second, cramps in the leg and hand during the night; third day, twitching of left eyelid which continued for one and a half days; fourth and fifth days, forgetfulness; eighth day, grinding of teeth at night; ninth day, watering left eye and dizziness, also an unusual problem with athlete's foot which is not normally a problem; then a sore in the mouth appeared. This was checked out with the dentist two weeks after the numbing with Xylocaine. He said the sore, which was on the roof of the mouth, resembled a virus-like eruption. It disappeared after a week or two. On June 16, numbness in the legs was experienced. The dentist said that his journal said the virus-like eruption was due to a deficiency of vitamin B-12, folic acid and iron.

Prior to her suicidal depression episode in 1959, and soon after the viral infection which preceded it, subject No. 2 had had a third molar extracted with Xylocaine used as an anesthetic. After a week or two, a short period of hyperactivity was experienced, indicating a slow metabolism of this item.

Subject No. 2 refuses to have local anesthesia for dental work and has not had it for 25 years. In 1985, a cytotoxic test for allergens showed Xylocaine to be a major allergen for her, along with corn and several other items.

Dr. Martin T. Tyler, D.D.S., in an article written for the Lupus Foundation by Henrietta Aladjem is quoted as saying: "They (lupus patients) complain of fungal infections in their mouths . . . others are allergic to Novacaine and to some antibiotics prescribed by dentists unaware of the potential adverse reactions experienced by some of these patients."

Because dental anesthetics caused problems for both the male schizophrenic and subject No. 2 with MCTD (Mixed

Connective Tissue Disease), there appears to be an underlying common problem.

Subject No. 2 is very sensitive to most drugs, including aspirin and antibiotics, but was able to tolerate Vistaril, which was used sparingly during the period of severe depression which lasted for several months. The multiple allergy problems which accompanied tapered off to some extent over the following years. By trial and error it was found that vitamin B-6, vitamin B-complex, calcium gluconate and dolomite were helpful for the allergies; vitamin A and hot water therapy were used for infections instead of antibiotics.

Because this family is of Mediterranean stock, a glucose-6-phosphate dehydrogenase deficiency (favism) may be a problem for some members (Orten, p. 118). For subject No. 2, the drug sensitivity problems began gradually with a rash from sulfa or penicillin before the age of 30 and at 30 there was an over-reaction to scopolamine during delivery in pregnancy No. 1.

Acetyl transferase, an enzyme produced in the liver, is involved in a number of biochemical processes including metabolism of certain kinds of drugs. With abnormally low activity of the enzyme the drug persists. Naturally occurring lupus may be no different from drug-induced, both involving a constitutional metabolic abnormality, severe reduction in the activity of acetyl transferase in lupus, according to Blau p. 64-65. Liver and splenic pain are associated with both lupus (Alad-jem (1), p.11) and schizophrenia.

The Etiology of Schizophrenia in the Light of this Study

In lupus erythematosus there is an excess production of antibodies against one's own tissues. In both diseases, schizophrenia and lupus, a latent virus is suspected as the problem in a genetically disposed individual; there appears to be overproduction of adrenaline and the thymus does not seem to be functioning normally, especially in the area related to the T-cells.

In lupus, the inheritance is believed to be by way of 4 genes on chromosome number 6 in the area of the location of the human leucocyte antigen (Aladjem (1), p. 146-147). What triggers an attack of SLE in a susceptible person? In some, exposure to the sun, in others an infection, in still other cases a drug taken for some illness produces the signalling symptoms. The allergy-like reaction, making antibodies to one's own tissues, is associated with a deficiency of certain cells in the blood called suppressor lymphocytes. Many casual factors can be identified, more or less important to different individuals, exposure to chemicals and physical or infectious agents, besides heredity. Allergy and sex hormones are undoubtedly involved. (Aladjem (1), p. 10-11, 44).

What part does stress or trauma play in schizophrenia? There is a report of a British study of 50 schizophrenics (Tsuang, p. 32) in which life events such as threatened danger, disappointments, or important fulfillments were noted prior to the onset of the illness. In comparison with a group of normal controls at least one independent event had occurred in the three-week period immediately before onset in 46% of the patients compared with only 14% of the controls. In spite of this big difference in the three-week period immediately before the onset of symptoms, nine weeks preceding this period there was no difference in number of events between the patient and control groups.

In the longitudinal study being reported in this paper 30 days was the most frequent period of time from the traumatic event to the onset of symptoms for both schizophrenia and MCTD. This follows the pattern of latent Herpes Simplex Virus which also may be activated by stress or emotion. The period of infection and the subsequent antibody formation period is estimated at 30 days. A precipitating event such as exposure to a suspect drug or vaccination may occur several months or up to two years previous to the initial episode, according to this study. The periods of greatest vulnerability are the teething periods or other periods of developmental change or accelerated growth such as after surgery for cleft palate or heart surgery, also the high estrogen production periods in the female, peaking at about age 35. Estrogen is related to the high rate of growth of uterine tissue. (Budoff, p. 137). *The herpes virus appears to ride piggyback on the growth process.* If and when sunshine stimulates DNA particles in the skin (as is

believed by some researchers in lupus) it probably and understandably also stimulates growth in other parts of the body, but according to a genetically programmed time clock. An alternative explanation would be that sunshine affects the pineal gland which may affect growth anywhere in the body along with the latent virus. Studies of the function of this gland are reported in an article by Bruce Fellman in *Science 85* entitled "A Clockwork Gland".

Identical twins will both develop schizophrenia under the same conditions at the same age with a high degree of consistency. Age 28 is not too old for further growth and development of the jaws, the last major developmental change in the body occurring after the atrophy of the thymus at age 15.

It was discovered, while x-raying the teeth and supporting structures of subject No. 1, that there was noticeable deterioration of the bone. Greenberg at the University of California, in experimenting with rhesus monkeys made deficient in vitamin B-6, reported effects including hardening of the arteries, dental caries, liver disease, effects on tooth development and degenerative changes in gums, tongue and jaws. (Rodale, p. 230). B-6, a versatile vitamin, is involved in antibody formation which is important in allergy and infection. In the article by Sohler and Pfeiffer, "Vitamin B-6 Nutritional Status of a Psychiatric Outpatient Population" B-6 deficiency was found more pronounced in young adults and in the aged. These age groups correspond to the periods in which there might be thymic problems and a need for more B-6.

In 1954, one of the youngsters in the family (youngsters mentioned in this paper are children of subject No. 2) at age 20 months, went into a problematic teething period with a red facial rash which spread to the thighs. The doctor's salve had no effect. The child had no appetite, appeared distressed and peaked, was falling over on one leg while at play and suffered from green diarrhea. The child was being given Zymadrops, so a deficiency of the major vitamins was unlikely. The mother consulted the child care guide, changed the diet, as recommended, to bland foods, milk and cereal, but the diarrhea continued, inexplicably, to be green. In desperation, the mother, with perverse logic, decided to try a diet of the most green material she could find, Beech-Nut baby food garden vegetables, which consisted of green beans, carrots and peas. Almost miraculously, in 24 hours, there was a drastic change on this diet, the diarrhea gone, things back to normal very rapidly, with the exception of the leg problem, and the improvement did not coincide with the eruption of the 2-year molars as would be expected, but occurred before. An orthopedic surgeon was consulted, x-rays were taken of the child's leg and it was recommended that the child be allowed to play outdoors as if nothing was wrong, that it would go away, which it did, after several weeks.

The remarkable recovery on this particular food combination was remembered by the mother, and the same therapy was used on a few other occasions with subsequent children. However, each individual vegetable was tested by itself, and the successful results could only be obtained with that particular combination. The elimination of corn in the child's mixed cereal was not considered a factor then. Corn is low in amino acids lysine and tryptophan and a severe allergen in this family. This person, now an adult, vomits after eating sweet corn and has developed a severe seafood allergy, but no tendency to depression or schizophrenia surfaced later in life.

A cursory analysis of the dietary change yields the elimination of a major allergen, a modest shift in lysine balance and a notable addition of B-6, zinc, magnesium, pantothenic acid, beta carotene, carnitine and betaine with other unknowns which may all be beneficial in the immune process. The idea that immune system problems associated with growth could be solved with diet persisted.

The hopes for a fast and complete cure of schizophrenia were further nourished by the story of two researchers traveling to different parts of the world in search of a natural cure for schizophrenia that might possibly be in use by primitive people. While in Africa, they witnessed a native practitioner place an obviously demented man in a hut overnight, give him his secret treatment, and the man came out of the hut the following day normal and cured. The researchers tried to get the secret of the treatment from the so-called witch doctor but he

would not part with it no matter how hard they tried to coax it out of him.

For thirty years the puzzling success of the baby food experiment simmered in the back of this observer's mind. The time element in all this was particularly noted and the viral connections, if any. The post-viral period seems to be problematic but certain growth periods also have something like a counterpointal negative influence on the immune system. The child had had a viral infection some time before the rash appeared. It was extrapolated that the appearance of schizophrenia in young adults age 15 to 30 may follow the pattern of growth and development of the third molars and their supporting structures, because in youngsters immune system problems seem to cease suddenly with the eruption of the tooth or teeth.

Sometimes schizophrenia ends spontaneously, perhaps due to the cessation of the growth period. In some cases, the entire acute stage covers two years and then spontaneously disappears; in others, there may be a break between two periods. This coincides with a possible pattern of third molar supporting tissue development. Subject No. 2, the female former histadelic, experienced this growth at ages 21, 27 and 36 (molar number 3 was impacted and deformed and number 4 never developed at all) so a mean age of 28, as noted in the development of schizophrenia in the two male first-cousins-once-removed, after they returned from service, is not out of line.

The common element in the three situations of cleft palate, heart surgery and jaw development is that they all involve the strongest muscles in the human body which contain biochemicals of vitamin B-6 in notable concentrations.

Question: Does the appearance of schizophrenia coincide with the beginning or acceleration of a growth, repair or developmental phase in a virus-compromised host? In identical twin studies, schizophrenia appears at the same age in both but it does not necessarily appear in 100% of the cases, although the correlation is very high in comparison to less genetically re-' lated subjects. This points to a hereditary time clock for growth and development (Fellman, 1985). It should be noted that the thymus gland, with which many of the immune system functions are associated, atrophies somewhat after age 15 and that the period when schizophrenia is most likely to develop is between the ages of 15 and 30.

Two young females in this family under study, at age one and two, respectively, were taken to the family physician and he was asked why the very young children had their tongues sticking out from time to time between their lips in a relaxed manner. He said it was because they were fat. These children were not fat. Subsequently an explanation was found in a book indicating a problem with the thymus gland.

Thymosin activity declines after the age of 20 or 30, according to Dr. Sheldon Paul Blau, in his book, *Lupus: The Body against Itself*, and is not detectable at all after age 50. The process may be premature in lupus patients, as suggested by at least one small reported study. (Coincidentally, it is soon after age 50 that Alzheimer's disease may occur.) Dr. Jean-Frangois Bach of Clinique Nephrologique in Paris assayed the thymosin activity in 22 patients, all in the usual lupus-onset age group, and some described as very young. Nineteen of 22 showed no detectable thymosin activity whatever. It is believed that the T-cells (thymus-dependent) or the gland itself or both have controlling influence on the B-cells (bone-marrow-derived) which do the damage by over-reacting (Blau, p. 90-91).

Regarding heredity, (Cho, p. 474): "Family history is of key importance, as many of the immunodeficiency diseases are genetically determined. The pattern of illness in affected relatives may be a clue to the specific disorder in the patient. Disorders that are X-linked, such as Briton's agammaglobulinemia, thymic dysplasia, and certain types of chronic granulomatous disease, are suggested by evidence of involvement of maternal uncles or cousins." This is exactly the hereditary pattern found in this longitudinal study of lupus and schizophrenia! Immune deficiency is the opposite of lupus, however.

In studies using l-lysine for control of Herpes Simplex Virus I (cold sores) its use has been reported successful with no harmful effects for as long as three years. Double-blind controlled studies have not been successful, according to sources consulted by this observer to date. With all the variables

involved this is not surprising. Dosage range is unknown and probably varies from person to person. Supplementation on a maintenance basis appears to be more effective than use after the virus has progressed. Subject No. 2 used only 500 mg per week or ten days and this was effective. There was a noticeable increase in gray hair, or a decrease in melanin, a favorable development. Definite improvement in the strength of the eye muscles was noted, also. There may be a problem for some individuals in the taking of an acid.

In the literature, the only caveat found to date is for pregnant and lactating women because growth suppression was found in baby chicks and rats fed the amino acid at the Mayo Clinic. (Schwartz, 1985; Orten, p. 394). No recommendation for use or dosage is implied in this paper; this is an academic report on how l-lysine supplementation affected two people whose genetic background suggested an immune system problem. The profiles are those of two individuals.

Subject No. 1 developed brown spots and warts (the first sign of a problem) after induction into the army in 1955 after having received the usual inoculations. He was treated with bismuth sulfate by an army physician for this. The appearance of melanin sometimes heralds the beginning of schizophrenia, but the disorder did not develop in this subject until two years later during the trying period of post-service adjustment, when career opportunities seemed dim. In this family, immunization per se was not noted as being related to subsequent problems, perhaps by oversight, except for the delayed severe polio vaccine reaction (asthmatic bronchitis) in the youngster at age 19 months. At the time, the attending physician suggested it might have been due to the withholding of the child's vitamin drops, in particular vitamin A, during that summer. The thymus gland was mentioned in this connection when a friend had a child with a similar problem. In lupus cases the avoidance of immunization is recommended. Subject No. 2, the his-tadelic, experienced severe over-stimulation after the use of small doses of Premarin in menopause. One of the components of this product is horse material. Biological materials used in medicine, in particular, had a deleterious effect on members of this family. *Life Extension* by Pearson and Shaw, p. 661, has this message: "Caution: Schizophrenics should use growth hormone (GH) releasers with caution since they *may* increase the severity of symptoms. GH releasers include L-Dopa, arginine and ornithine (some schizophrenics may experience worsening symptoms, possibly due to the effects of methyl donation by polyamines made from these amino acids in the body), and bromocriptine (in doses over 30 mg a day, adverse effects on schizophrenic symptomatology may occur in some people.) If this occurs, discontinue use of the GH releasers." Arginine is a growth hormone releaser!

The Viral Connection

If an acceleration in the normal growth process occurs anywhere in the body, after the thymus gland has been negatively affected in some way, and at the same time, herpes virus is stimulated to grow where it has been latent in the brain, an allergic reaction may occur there in schizophrenia. This is the main conclusion of this study, based on this particular family's hereditary pattern.

The male schizophrenic, at approximately age 2, had crusts around the eyes for a long time. To the observer it seemed to be about two months, at least. The observer was only 8 years old at the time but remembers the event because it was so unusual and somewhat anxiety-producing. Later in childhood, subject No. 1 had mumps, a very mild case of measles and *no chicken pox.*

Drs. Cho and Dudding in *Pediatric Infectious Diseases,* p. 191, have this to say: "Primary herpetic infection of the skin, mouth or eye usually occurs between one and five years of age and is often associated with constitutional symptoms such as fever, malaise, chills and regional lymphadenopathy. The lesions consist of crops of thin-walled vesicles on an erythematous base. They generally progress from macular to papular lesions then vesicles, pustules and crusts in 7 to 10 days (up to 2 weeks) without leaving a scar." The virus is thought to go into dormancy at the site near the original

infection which, in this case, could very easily be the brain.

One of the youngsters (child of No. 2) had a rash on the cheeks after being introduced to fruit at age 4 months, which, in this case, was apple sauce. As an adult, this person suffers from recurring pain in the upper jaw from malocclusion (from vitamin B-6 deficiency?). This person has Raynaud's phenomenon, also, and apples have been found to be a common allergen in at least three people in this family. An unusually severe case of chicken pox was experienced by this youngster at age 1, suggesting that the overall inheritance picture is that of high vulnerability to viruses of the herpes class. Drs. Cho and Dudding, on p. 190, also have this to say about herpes infection: "Involvement of the central nervous system occurs in about 50% of infected newborn infants and is usually manifested by irritability and seizures."

P. 189 (same book) "When the primary infection subsides, Herpes Simplex Virus is not eradicated from the host, the infection becomes latent and the virus presumably remains in the ganglia for years or even for life, with recrudescence of activity at irregular intervals."

"Circulating antibodies and hypersensitivity reactions are generally present during latency or reactivation stages. Antibodies do not affect the intracellular virus and do not limit cell-to-cell spread of the virus or prevent activation of the disease." Subject No. 1 does not experience reactivation of HSV I with skin lesions.

In the December, 1983, issue of the *Atlantic Monthly,* Joseph Alper, reviewing the work of E. Fuller Torrey, states that chlorpromazine suppresses cytomegalovirus replication. Subject No. 1 was sent home from the veterans' hospital with a supply of Thorazine (chlorpromazine) for troublesome episodes. CMV is a member of the herpes virus family which is known to have an affinity for the limbic system, the region of the brain that is affected in schizophrenia. CMV infection is the most commonly recognized infectious cause of nervous system damage in the fetus and the unborn child. Herpes viruses can remain latent and not produce signs of infection for years. Torrey has found that a third of the schizophrenic patients he examined had an antibody (usually an artifact of a past infection) against cytomegalovirus (CMV) in their cerebrospinal fluid. He discovered such antibodies only rarely in patients with other neurological ailments, and he saw them virtually never in healthy people. For the past ten years Torrey has been accumulating evidence that viral infections early in life, perhaps before birth, are responsible for a certain percentage of schizophrenias.

In the case of subject No. 1, the clinical manifestation of the infection at age 2 was that of Herpes Simplex Virus I. The successful use of Thorazine suggests cytomegalovirus. Subject No. 2 had an infected thumb at about age 8, the summer of 1930, when subject No. 1 was approaching age 2. This could have been secondary to Herpes Whitlow. At age 21, subject No. 2 experienced shingles (Herpes Zoster) over the rib cage, when her first third molar was due. There is evidence of infection by more than one type of herpes virus in the two subjects.

In *Lupus-Hope through Understanding,* on p. 159, Dr. Fred Quimby is quoted in connection with lupus: "The latent virus theory, however, is completely different. In this theory the infectious agent may well be part of the individual's body from birth. The virus is not found in the environment, but, rather, transferred from the parents to their offspring through genetic mechanisms."

Overview

On p. 158, Aladjem (1): "Another interesting phenomenon is that other, non-SLE, autoimmune diseases frequently develop in the offspring of parents with SLE. This implies that the tendency to develop any autoimmune disease is inherited by a mechanism separate from that which dictates the precise disease." Multiple genes are believed to be involved in the production of SLE.

A new concept of lupus erythematosus, lupus-like disease such as Mixed Connective Tissue Disease and subsets is mentioned by Dr. John A. Goldman in an article from *Horizons* (a publication of the Greater Atlanta Chapter, Lupus Foundation of America). This concept would place many of these disorders with a similar mechanism under a large umbrella. There is

much evidence in this longitudinal study that some schizophrenias are hereditary autoimmune diseases with a viral connection, which may qualify them, along with Multiple Sclerosis, for inclusion under the lupus, lupus variants and subsets classification.

There have been at least eight cases reported in which laboratory findings suggest lupus, while the clinical picture was that of typical MS. In MS there has been some therapeutic success with corticosteroids, though not to the degree seen in lupus. In late 1975, Drs. Henle and Koldovsky of Philadelphia confirmed the existence of a "virus like" agent in the brain and sera of MS patients. It has not been found in healthy controls (Blau p. 79).

Connecting schizophrenia with lupus does not offer much hope in the way of treatment, because some of the drugs used in handling that disorder are very potent, life-saving, emergency-type approaches with serious side-effects.

A customized management program is anticipated rather than a magic pill in the treatment of schizophrenia. When one compares the treatment of MS and lupus with the Orthomolecular treatment of schizophrenia there is much to be said in favor of the latter.

In her book, *The Sun Is My Enemy*, Mrs. Aladjem (p. 128) maintains that her lupus cure came from injections of nicotinic acid which she had heard were being used in Bulgaria. Similarly, the pioneering Orthomolecular psychiatrists, Hoffer and Osmond, in 1951, began the use of megadoses of nicotinic acid in the treatment of some types of schizophrenia. Is this an indication of a common biochemistry? If a common viral basis for some of these disorders could be demonstrated, perhaps better terminology than "split mind" and "red wolf could be justified.

In both lupus and schizophrenia the first symptom is fatigue. Dr. Theodore Nadel-son, in *Lupus-Hope through Understanding*

8 June, 1978

Mrs. Josephine M. Masterson

829 Fernwood Court

Indianapolis, Indiana 46234

Dear Mrs. Masterson:

You were in the office on June 1, 1978, at which time your height was 5 feet, 5 inches and your weight was 120.5 pounds. Your blood pressure was 120/70.

Your electrocardiogram and chest x-ray were normal. Your blood count, urinalysis, uric acid, cholesterol, blood sugar, electrolytes, thyroid tests, and tests of your liver and kidneys have returned and they are normal.

My feeling is that you probably have schizophrenia, or a tendency to have schizophrenia. I feel it is very important for you to see a psychiatrist to have your medications regulated. I gave you the name of Dr_____ to see. If this is not convenient for you, I will give you names of other psychiatrists.

Your blood pressure was perfectly normal, and I do not feel you need any antihypertensive medications at the present time.

Sincerely,

-M.D.

Fig. 1 The correct diagnosis of Mixed Connective Tissue Disease, a lupus-like disorder, was arrived at in 1984.

describes a lupus patient as going through life as if carrying two 40 lb. valises. It is easy to visualize how a small amount of stress added to this burden would be more difficult to handle than for a normal person. When extraordinary stress is encountered by such a person, psychotherapy to help resolve problems (not probing and psychoanalysis) is recommended in this book. A positive mental attitude, avoidance of anger, and other personal methods may be employed to minimize the effects of stressful situations. It should be noted that it is not basically the stress which causes the illness but that it is influential in the same way as in allergy or cold sores. In cancer, emotion has been cited as having an effect on the immune system, and so, here too, in schizophrenia and lupus, where the immune system is also involved, it is not entirely insignificant.

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