Schizophrenia*

Introduction

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We have been living in an age of rapid progress. Things undreamed of a hundred years ago have appeared and have made surprising changes in all of the great problems of life. This is true, especially, in the mechanical world where man's ingenuity has achieved remarkable results.

In the midst of that turmoil of progress, sixty-five years or more ago, there appeared on the scene a man, Dr. A. T. Still, who had the courage and the strength of character to step outside of the beaten pathway of all the past ages, and declare that there was a better way to cure disease than by dosing with drugs and poisons. He began the study of the human body, the human machine as he loved to call it, from the mechanical viewpoint. It was he who first declared that the fundamental cause of most diseases could be found in disturbed mechanics of the body. Unheard of reasoning, outside of all thought or investigations of the past, he alone fought the battle to give to the world a more sane and rational treatment for the cure of disease. His was a courageous fight which was crowned by success during his lifetime. He won the victory and gave to the people of the earth a system of treatment which is wielding an influence that is touching all civilization.

Many of his results were considered miracles in the beginning, to the extent that people criticized him as being linked with Satan instead of a co-worker with the Master who created such perfect harmony as is found in His masterpiece—man.

As many of you know, it was my privilege to stand close to Dr. Still in the beginning years of his struggles, even before he started a school to teach his new science. It was a rare privilege, so reasonable, so sane was his philosophy and so marvelous his discovery. From the time he began teaching his methods until the present, his theory has spread step by step until we find thousands of physicians who are treating the sick according to the concepts of Andrew Taylor Still. It was good to fight for him in the beginning, and it is our heritage to continue the fight so that Dr. Still's discovery will be destined to live throughout all time.

For the past quarter of a century it has been my privilege to labor in a field of unlimited scope, psychiatry. I want here to emphasize what osteopathy has done and is doing in the treatment of insanity, especially that form of insanity known as schizophrenia. The ablest men in all other systems of practice claim that they do not know the cause of this disease, neither have they any treatment they call specific, yet we with our more than twenty-four years of experience at Still-Hildreth Osteopathic Sanatorium at Macon, Mo., in the handling of over 5,000 cases, know that we have a treatment that is curing the largest percentage of that type of insanity ever heard of.

Thus it is, that Dr. Still's declaration nearly three-quarters of a century ago, that there is a better way to cure the ills of mankind than by drugs and dosing, is being proved. Osteopathy is securing results in this field which had never been accomplished before Dr. Still's declaration of the fundamental principles which have been and are today revolutionizing the treatment of disease.

I glory in the privilege of telling you these things, hoping that you will unite with others in trying to find the way to reach the multitudes, so that the children of this age may be taken to a local osteopathic physician and have their physical defects corrected, thus preventing hundreds, or even thousands, of young people from having this disease, schizophrenia. I hope that a way may be found that all parents who have young people suffering with this condition may be informed of the value of osteopathic treatment, and that a cure is possible, based upon correction of physical causes.

It is my belief that the day is not too far distant when the entire scientific world will be ready to recognize the fundamental principles announced by Dr. Still and will be convinced of the efficacy of treatment based on the correction of structural alterations of the body.

You and you alone have a preventive treatment; you and you alone have a treatment for schizophrenia that the world should know more about.

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Diagnosis and Treatment

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Schizophrenia during the last two years has become a familiar disease to the reading public. Previous to this it was practically unknown except to the healing professions and to those families who had a member afflicted with the disorder. This change has been brought about partly by the discovery of new methods of therapy and partly by the publicity given to it by fraternal and medical societies. This new interest has stimulated active treatment for the dementia praecox patient, and has been instrumental in returning many individuals to society who in former years would not have received any curative treatment.

This more hopeful attitude for the dementia praecox patient, as well as the trend to active physical treatment for the insane, are the two most noteworthy progressive steps yet taken in the field of psychiatry. Psychiatry, as one of the younger branches of medicine, has a great deal yet to achieve. But definite progress is being made in the recognition and treatment of mental disorders.

Dementia praecox is the most serious mental problem that confronts the psychiatrist. It begins in young adulthood, incapacitating the individual for further economic effort, without any material shortening of life. Each year 40,000 new cases develop, at

least one-half of which are admitted to state institutions; the others lead an unproductive existence at home. Since few of these patients suffering with dementia praecox have been cured in the past, they have gradually accumulated in custodial institutions, so that while only one-fourth of the patients entered are of this type, still they account for two-thirds of the inmates. In the United States there are one-fourth of a million of these patients being cared for by public funds, which is double the number of criminals in the state penitentiaries.

Theories.—There are perhaps more diversified opinions as to the cause of dementia praecox than any other disease.

(*a*) Kraepelin advanced the theory of autointoxication caused by a disordered secretion of the sexual glands.

(*b*) Freud thinks that there is a fixation during the first stage of sexual evolution, and the symptoms are attempts at self-cure.

(*c*) Jung regards schizophrenia as a habitual tendency to introversion, a regression to the collective unconscious.

(*d*) Mott thought it was caused by an inherited lack of durability of the cortical cells.

(*e*) Myers views schizophrenia as a reaction type, the result of repeated failures of the individual to adapt to his environment.

Etiology.—There are probably many contributing factors in every case of dementia praecox. Eighty per cent of these patients have hereditary taints; forty per cent give a history of family insanity, which is three times more frequent than in the nonpsychotic. When one parent has dementia praecox, ten per cent of the children will develop the disorder and twenty per cent more will have schizoid traits or shut-in personalities. If both parents have dementia praecox, more than half the children will be so afflicted. However, a poor heritage does not make the prognosis unfavorable for the individual, as statistics indicate that it does not have any effect upon the recovery rate. Both sexes are equally liable to the disease, but in the female the tendency is to develop it later in life. The age limits are not circumscribed, but most cases develop between the eighteenth and thirtieth years. This period of puberty and young adulthood with its critical adjustments and its emotional problems of sex, religion, society, education and vocation, is often a stumbling block to the normal evolution of the personality. Thirty per cent of cases give a history of precipitating factors such as childbirth, trauma, emotional crisis, or acute diseases.

Pathology.—The pathology can still be stated in the words of Esquirol, the French psychiatrist, who in 1835 wrote "Pathology is silent as to the seat of the madness."

Symptoms.—Dementia praecox is a chronic progressive mental deterioration, characterized by a great variety of almost unexplainable symptoms. It is divided into three types, the hebephrenic, catatonic and paranoid, the prodromal symptoms being the same in all types. The disease is very insidious in its onset; at first there is often a feeling of failing health—the patient is troubled with insomnia and vague headaches; he tires easily, concentration requires an added effort, even routine duties become difficult; in every way life is more of a problem. Gradually a character change is noted—he becomes unsocial, withdraws from reality, loses interest in external matters, neglects friends, work and recreations, develops moody or depressed spells, is suspicious and easily irritated. These early symptoms may last from a few days to several months.

Hebephrenic Type.—With the character change, transitory delusions appear which are often associated with hallucinations. At first they are of a depressed nature and are the cause of much concern to the patient; later the delusions and hallucinations become commonplace and often pleasant. In most cases there is a marked slowing down of voluntary activity, the patient is content to do nothing, absorbed in autistic thinking. The emotions, which are dulled from the beginning, deteriorate rapidly, so that the patient expresses neither desires, fears, sadness, nor joy. The family, friends, work and recreations are viewed with equal indifference, but regardless of this, perception, consciousness and orientation are clear and memory is unimpaired. Judgment is always involved and conduct is marked by impulsive and unexplainable acts. The condition terminates in a varying degree of dementia.

Catatonic Type.—The patient becomes very depressed, religious delusions frequently appear. He may think he is in communication with the devil or that he has committed various sins. Peculiarities of action are common; unnatural and awkward positions are assumed. Later the catatonic excitement or stupor develops. In the excitement, voluntary activity is markedly increased, the patient is restless, excited and hard to control, is often destructive and frequently commits distressing acts; speech is flighty. The stupor may proceed, follow or come on quickly during the excitement. With the stupor, all voluntary activities are inhibited, the patient is resistive, may stop eating and talking; even retention of the urine is common. These patients look sick and are often treated for acute illnesses which do not exist. In the catatonic type the action of the dementing process is slower but eventually the mental impairment becomes marked.

Paranoid Type.—The delusions and hallucinations, which are very prominent, appear early in the disease. At first they are depressing, so that the patient may become very religious; later the depressed delusions are mixed with or replaced by more pleasant ones, the patient becomes happy and has an exalted opinion of himself. After a course of years, dementia supervenes.

Physical Symptoms.—The physical symptoms indicate a disturbance of the sympathetic nervous system and are: epileptiform seizures, dilated pupils, vasomotor disorders, subnormal temperature, loss of weight in acute stage, increase of weight in terminal stage.

Diagnosis.—In advanced cases the mental enfeeblement, emotional deterioration, delusions, hallucinations, weakness of judgment and disorders of conduct, when found in youth, make the diagnosis easy. But an early diagnosis is most essential, since the prognosis, which is very favorable early in the disease becomes most unfavorable after the disease has been established a few years. Any character change in a young person which cannot be attributed to natural causes, a withdrawal from friends, a tendency to be ill at ease and unsocial, an indifference to school work or occupation, complaints of inability

to concentrate, of unreal feelings, are all symptoms which may be the first warnings of dementia praecox.

PROGNOSIS AND TREATMENT

The prognosis for patients with schizophrenia has been considerably improved during the past few years, especially in respect to early cases. The ratio of recovery is in direct relation to the duration of the disorder. A hopeful prospect, who fails to receive the most suitable handling of his case in the beginning, becomes less favorable with the passage of months or years. Cases that have developed acutely, and in which the gravity of the problem was recognized promptly and adequate therapy instituted, should have a recovery prospect of between 60 and 70 per cent. Cases with prolonged and indefinite onset, where symptoms have been unrecognized, or their warning neglected for extended periods, necessarily show a less favorable recovery ratio. The chronic deteriorated patients have but little promise of again resuming normal lives, and continue to be baffling problems, regardless of therapy.

A consideration of treatment begins with observations concerning prophylaxis. Viewed in long term adjustment values, the type of personality most susceptible to schizophrenia, is that designated as introverted. The years of childhood constitute an important factor in the molding of patterns by which later life will be regulated. The early training and the guidance received from parents and older associates become an influence, later revealed as assets or liabilities in meeting the demands of maturity. The child showing tendencies which suggest withdrawal from the normal, wholesome activities of childhood, that interfere with associations with other children, may be tactfully directed. Wise is the parent who can maintain a parent-child relationship that permits independence of thought and action necessary for the development of self-reliance, and yet impose the proper discipline to cultivate self-restraint. Religious and sex matters become a frequent source of phantasy, and later difficulty, especially when allowed to continue, surrounded by excessive emotionalism. The object of prophylaxis is the development of balanced reactions in the entire field of personal adjustments, with the sublimations progressing through successive stages, with the greatest possible harmony and satisfaction to the ego.

While evidence is entirely lacking that the latency, here mentioned, is associated with endocrine, nutritional or physiological disorders, it is not beyond consideration that the psychological bent is influenced, at least in a measure, by obscure causes closely related to, or identical with, these fields of function. During the formative years, physiological gradients are being laid, which as strongly influence the later mental virility as the purely psychic experiences. Reasoning from this basis, any latency has its strongest counteracting influence in the osteopathic care of these children, and only the most comprehensive understanding will result in marked success.

Considering the treatment of developed cases, symptoms will modify the requirements of each. In management, a wide variety of behavior may be anticipated, and some type of institutional care is, in most instances, necessary or advisable. The content of thought being occupied with subconsciously induced phantasy, the patient is found in a greater or less degree intellectually and emotionally out of touch with reality. The phantasy is usually sufficiently real to the patient that he is convinced of its origin in some specific material or supernatural source. Special symptoms, while they exist, such as restlessness, agitated excitement, acts committed under the compulsions, or actuated by motives of delusional origin, must of necessity be dealt with as the needs arise. The importance of an individual with experience in attendance is obvious. Sedatives are seldom required and their use where other facilities are available can be practically eliminated without disadvantage, and with the patient's welfare best served. Prolonged narcosis has been attempted, with a result of controlling agitation only during the period of maximum toxic effect of the drugs used. It has failed to prove a reliable means of treatment. Prolonged baths and packs serve better to quiet the excited.

In the degree to which contacts with realities are retained, an approach remains open through the encouragement of activities and productive effort. Recreational and social pursuits, games and suitable occupational endeavor are helpful. Exercise, sunlight, and a routine conducive to general physical welfare are of value. The supervision of nourishment taken, the correction of unwholesome habits in eating, a menu aimed to supply a balanced nutrition in all food elements, and careful attention to the elimination are essential.

Psychotherapy in its technical application has not met with gratifying success in the schizophrenic group. Some writers have pointed to the possibilities of increasing the introspective withdrawal by prolonged discussions which may be grasped only in part. Analytical considerations have permitted a better understanding of the basic psychological problem of the disease, and in this way have contributed to a more practical management of the individual case.

Osteopathically considered, the effects of manipulative treatment in the schizophrenic case reach their objective through the autonomic nervous system in the identical manner that has given osteopathy its potency in other fields. Fundamentally, the osteopathic approach does not attack the psychosis itself, and therein lies mainly its strength.

The group of observable phenomena, which mark a psychosis, are symptoms of disorder, of which cerebral dysfunction is only a part. The clinical record established on this philosophy speaks its worth. It is necessary to review the clinical significance of the osteopathic lesion, and an attempt to demonstrate a particular lesion typifying psychoses is by our means futile. Of practical interest are the associated lesioned regions, with predominant importance in the upper thoracic region, where the most centralized control of the autonomic mechanism is located. The cervical and splanchnic lesions are only slightly less important.

Recently there has come into the field a new therapy, which has been given much acclaim. Reference is to the insulin shock treatment. While observers of the early effects of this radical treatment have reported spectacular remissions in a high per cent of cases, its true worth will be determined only by broad experience, and the long term observations of results. It is generally conceded by conservative observers that little can be offered the chronic established cases. Already warnings have been issued by the Committee on Public Education of the American Psychiatric Association and by outstanding clinics.

They have asserted that benefits in all cases from the new treatment may easily be overemphasized.

It should be kept in mind that the treatment is highly empirical, and that the scientific basis for such benefits as are observed, have not been established. The profound physiochemical reaction, occurring during deep shock, has never been clearly defined, and consequently science is without provable explanations of the changes that occur in the cerebral centers. Most commentators have credited the effects to shock, rather than any specific action of insulin in its capacity as a glandular product. Evidence pointing to this conclusion is suggested by the fact that other drugs producing shock give results somewhat similar to that of insulin.

Metabolism is profoundly altered in all true shock from whatever source. Following massive doses of insulin, the systemic changes are severe, and the physiochemistry of the tissues sufficiently changed to produce far-reaching effects. The new treatment has given strength to the physiological concept of mental disorders, upon which basically the osteopathic concepts must rest. The strict psychologist has contended that during the coma of shock, the individual's mentality is reduced to the infantile level, and that he is thereby given an opportunity to start anew his mental life, and find more normal thought pathways than those marking his psychosis.

The intense evidence of the physical reaction during shock places the entire burden of proof of this theory on the psychologists. It is not so fantastic to view the shock methods as an effort to accomplish by sudden and heroic chemical means the same objectives for which the osteopathic specialist strives in his treatment and handling of similar problems. Manipulative aims are directed to the restoring of a psychobiological balance by marshalling the forces inherent in the organism, while the administration of insulin shock treatment seeks to restore this balance by sudden and repeated chemical changes.

TECHNIQUE OF ADMINISTRATION OF INSULIN SHOCK TREATMENT†

The time most advantageous for the beginning of the treatment is seven o'clock in the morning or shortly thereafter, following twelve hours during which no food has been taken. Since the tolerance of the patient cannot be predicted in advance, comparatively small doses are used in the beginning with amounts increased on successive mornings until satisfactory shock is produced. A shock reaction may be encountered with as small a dose as twenty units in some cases, while in others complete shock does not occur until dosage has been advanced to well over a hundred units. Reported cases have been given as high as three hundred units, but a requirement of this amount is comparatively rare.

Because of the fact that insulin given either intramuscularly or subcutaneously is but slowly absorbed, the effects are gradual in development. Individual differences in the manner of reaction are noted among various patients, and also the day to day reaction of the individual patient varies somewhat, though in general, similar symptoms tend to be repeated in the individual case.

In a typical sequence of symptoms, the patient is first noted to be growing drowsily quiet and somnolent, and usually within a half hour some reduction of temperature is observed; this tends to continue throughout the shock period. The rate of fall and the degree of fall varies in the individual case, but rarely is the temperature not appreciably affected. In cases reacting with an extreme temperature change, the fall may steadily continue until a rectal reading of 93 degrees has been obtained. Vasomotor, secretory, neurologic, and mental symptoms mark the increasing effect of shock. Associated with the fall in temperature, perspiration appears and in most instances becomes profuse over the entire body. Moist coldness and pallor of the skin surfaces develop coincidentally and during the third hour after the injection motor symptoms commonly begin.

A variety of disturbed motor phenomena have been observed, varying from mild spasmodic twitching of the ocular or facial muscles to gross convulsive and automatic action of the general skeletal musculature and even seizures somewhat suggestive of an epileptic attack. Periods of psychomotor restlessness and excitement are encountered with the patient tossing himself about and giving expression to much random content of thought, or, if the stupor is more advanced, uttering inarticulate sounds and screams.

With the subsidence of these motor symptoms, the patient usually subsides into a more profound stupor and coma than had earlier prevailed and the shock phase can be allowed to proceed providing the cardiac and respiratory functions are not dangerously affected. At this stage the neurological symptoms are those of hypotonia and altered reflexes. The swallowing reflex is lost and where salivation, which is quite common, is excessive, there is an accumulation and drooling of much saliva. Corneal reflexes are lost and pupils may be widely dilated or constricted and more or less unresponsive to light. Deep tendon reflexes tend to be reduced or practically lost during phases of deepest coma. The patient is unresponsive to all ordinary stimuli and cerebral functions are in complete shock.

During the advancing effects of shock, the heart has been placed under considerable functional stress and in the majority of cases has shown a moderate bradycardia. Marked and quick variations in heart action are observed, however, and associated with phases of motor restlessness or spasms the rate may leap to extreme rapidity and in the quiet coma following drop to an abnormally low level. Increased pulse pressures are also noted as a rule.

With the patient progressing without indications of undue danger, the effect of the insulin is allowed to continue for a period of approximately four hours. Termination of the shock is by the simple procedure of administering glucose, which provides sugar for the neutralization of the effects of the insulin. The amount of glucose required for the termination of the shock is in direct proportion to the number of units of insulin previously administered. Two grams of sugar are necessary for neutralization of each unit of insulin. Amount of solution given should contain a total minimum of twice the number of grams of sugar as units of insulin used in producing the shock. Early in the course, and even after a partial stupor has resulted, the patient may at the end of the four hour period drink the solution from a glass. As the course proceeds and the stupor becomes of a more comatose type, voluntary drinking is impossible due to the loss of the swallowing reflex

†This portion of the subject was delivered before the Nervous and Mental Section, but not before the General Session.

in the unconscious state, and the means most convenient for administration of the glucose solution is by nasal tube passed through the esophagus.

With the injection and absorption of sugar, the shock symptoms gradually are terminated and in a period of fifteen to thirty minutes the patient should be quite well aroused. The fall in temperature is reversed and the former level is attained gradually in the following hour or hour and a half. Cases are observed in which immediately following the administration of the glucose there is produced temporarily a deeper coma and a greater degree of cardiac stress than had been earlier evidenced. The more prolonged the shock the greater are the possibilities and the dangers of such a crisis.

The desire for food is usually stimulated by the administration of insulin, and, in the main, patients tend to gain weight during the period under treatment.

The administrations of insulin are repeated each morning with the exception of one rest day a week for an average of about eight weeks. Favorable cases have shown alteration in the general psychotic symptoms and evidences of improvement after the first few maximum shocks have been experienced.

Comparisons of permanency of results are impossible until data are available upon the subsequent history of recovered cases over a period of several years. In this connection it may be mentioned that several cases are now being admitted to osteopathic institutions, who have previously received insulin shock treatment. Their admission indicates a failure in their particular cases, but it will be interesting to note the number of these which make ultimate recovery under osteopathic care.

To the extent of osteopathy's expansion into the specialties, the entire profession is interested in development within each respective field. It becomes necessary to weigh openmindedly the advantages claimed or demonstrated by allied groups seeking the same objective. The question arises of the position osteopathic institutions should take in relation to the newly developed treatment. How best may the profession weigh its value and credit its account with such benefits as it justly can render? Even with considerable discount of claims on the basis of immaturity of judgment through limited experience, there yet remain indications of possible value. Can an attempt be made in selected cases to combine the treatment with advantage? Will the slowly responding case be speeded in recovery with the additional benefits of shock measure? Or can the present recovery rate under osteopathic care be advanced by supplemental treatment with insulin procedure? Does the osteopathic success parallel the insulin success, or are there individual cases more adaptable to the one treatment than to the other? To what extent may the failures under one therapy be benefited by the other? These and other questions seek an impartial answer that cannot be forthcoming except by experience.

The public has already been made insulin conscious, and among families with psychotic members the demand for insulin is being created. While some relatives hesitate to authorize the therapy, because, of the severity and known dangers of the induced shock, mainly there is impatience for results and urgent anxiety that insulin be given its opportunity. The new treatment has carried with it a certain spectacular quality so that in some quarters attempts have been made to dramatize it.

Conclusions for the present are necessarily guarded. Comparison of the reports of percentages of cases successfully handled under the two divergent methods are not in sufficient disagreement to threaten the prestige of osteopathy's merits in this field. For the present a conservative viewpoint must be entertained while the newer treatment demonstrates its proper value in psychiatry. The benefits of osteopathic care will in no way be altered.

WHAT IS THE MATTER WITH US?

There must be something radically wrong. We have always been known as a profession that "works" and now we are termed "lazy." To give a good osteopathic treatment requires real physical work on the part of the osteopathic physician. You cannot be lazy and remain in the profession, except in name only.

In a recent bulletin for optometrists the following statement was made. "It is getting more and more difficult to find an osteopath who will give you a good osteopathic adjustment. They all seem possessed to prescribe medicine and diet—which we can get from any medico." Later it says, "This profession is losing out with the people who originaly supported them and built their practices, for these patients still want osteopathic treatments. Disappointed, they drift away and count as patients no more."

This situation is critical. When the publication of an allied profession makes such a statement about us, instead of turning our diagnostic eye on our patients, let us turn it upon ourselves and see where the trouble may lie. Dr. Andrew Taylor Still said, "The rule of the artery is supreme," and any [disturbance of] the nerve control of the circulation of the body will cause a dysfunction of the area involved in the lack of circulation.

Maladjustment of the spinal column, the bony framework or the muscular structure will cause this [disturbance]. To prevent or cure a resultant disease or ailment this [disturbance] must be relieved. Only an osteopathic physician is capable of doing this.

When a patient goes to an osteopathic physician he knows that such a physician is qualified to give him this relief. If the osteopathic physician fails because he is "too lazy," he is doing himself and his profession a great wrong.

Specifically, if you haven't the time and the ability to treat your patient osteopathically, unless you are practicing a specialty such as surgery, proctology, etc., you should get out of the osteopathic profession and do something else. We need workers, not shirkers.—O. D. Ellis, D.O., *The Bulletin of the Nebraska Osteopathic Association* for March, 1939.