THE EARLY DIAGNOSIS AND TREATMENT OF DEMENTIA PRECOX.

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OUR insane hospitals are full to overflowing, and notwithstanding the fact that we are adding each year to their capacity, the yearly increase in the numbers requiring care is so great that the problem of housing our growing population of insane is a tremendous one.

There are many reasons for this great increase in numbers. One of the most important is that the general public has come to feel, in spite of frequently recurring sensational charges of brutality, that the hospitals for the insane can and do care for their inmates humanely. This has resulted in the commitment in recent years of very large numbers of cases of senile dementia, filling the infirmary wards with feeble bed patients who require a great deal of nursing, and severely taxing the capacity of the hospitals.

But these senile cases, many of whom are only technically insane, showing only the expected breakdown of advancing years, have a fairly short expectation of life, and are continually making room for other patients. There is another class of patients, however, who come under the care of our institutions at an early age, and as their form of mental disease tends toward becoming chronic, without any necessary impairment of their physical health, their accumulation fills our wards with hopeless mental wrecks. I refer to cases of dementia precox. It is a fact, which need not be discussed, that the earlier a disease is diagnosed, and given proper treatment, the better is the prognosis. In the case of mental diseases, this holds true, as well as in other abnormal conditions. Yet, as a rule, patients who are suffering from a mental breakdown are not seen by physicians who have had experience in that line of work, until the disease is so far advanced that treatment in a hospital for the insane is sought as a last resort. Men who make a specialty of mental diseases do not often see their patients until the mental symptoms are quite pronounced, and it thus becomes necessary that the general practitioner should recognize the incipient stages of insanity, if we wish to make a great advance in its treatment.

I have already referred to two forms of mental disease commonly seen in the insane hospitals. If to the cases of senile dementia and dementia precox, we add those of manic-depressive insanity and general paralysis of the insane, or dementia paralytica, we will find that we have given the diagnosis of a very large percentage of our insane patients.

In manic-depressive insanity the prognosis is good, almost without regard to treatment. Although the disease is essentially a recurrent

one, the patient will generally recover from the present attack, and it is a question how much that attack can be shortened by treatment.

General paralysis is a mental and physical disease, the mental symptoms usually being marked delusions of grandeur, followed by extreme dementia and death. This disease is so generally preceded by syphilis that by many of the most noted psychiatrists it is claimed that syphilis is always present in the etiology. The prognosis is invariably bad, and so far as the patient and his family are concerned, the fact that the average duration before death is only about two years, is a consoling feature.

Senile dementia is too common an ending for those unfortunate enough to outlive their usefulness, to need description.

I have dismissed these three large groups of cases thus summarily for two reasons. They are well known, and are not apt to go long undiscovered. Then, too, early treatment makes very little difference in the result; they get well or they die. On the other hand, I feel that an early diagnosis of dementia precox is much more essential in the light of the ultimate prognosis as influenced by early treatment. The prognosis in this disease is usually considered poor. I remember, not long since, when one of our state hospitals was severely criticised for including in its statistics a recovery in a patient diagnosed as dementia precox. This is no longer the case, though there are still some who insist that if there is a recovery, the diagnosis of dementia precox must have been an error.

In many physical diseases, we are familiar with certain well known prodromal symptoms, whose appearance causes us to take immediate steps for the safety of the patient or those about him. In dementia precox we often learn, when it is too late, that the patient has, for a long time, shown symptoms that should have been interpreted as danger signals. Unfortunately these signs are not heeded, for they are displayed only before parents and relatives, who are too blind to see them.

There is probably no form of mental disease where heredity plays such a tremendous part in the etiology as in dementia precox. I do not mean that you should expect always to find a history of insanity in the parents, but rarely will a case be found without some mental or neurotic taint in the family. The parents are very often eccentric, to say the least, and it is not to be wondered at that their prejudiced eyes should see nothing abnormal in their children, until it is apparent to everyone else. If, then, the parents cannot be expected to discover the early signs of an oncoming dementia precox, it is very necessary that the only ones left who have a close intimate relationship to the child, the family physician and the teacher, should be thoroughly familiar with the symptoms.

Kraepelin states that at least 70% of dementia precox cases show hereditary factors in the etiology, but that only 17 or 18% is found in

direct ancestry. A careful analysis of histories, however, would lead us to place this latter estimate much higher. We often find in the history of the parents that the home surroundings were not comfortable, that one or both parents were unable to adapt themselves to common-sense relations, or that the father, for example, had not made a success of life. Many of these cases of marital incompatibility, and of the unambitious, unsuccessful drones, were very probably mild cases of dementia precox themselves, or the results of the same disease, with partial recovery.

When we consider that heredity is so important in the etiology (in fact Clouston insists that heredity is always present), we should be prepared to find that there is a distinct type of personality that seems predisposed to this form of mental disease. This is the case, and August Hoch has given this type a name which is very apt, the "shut-in personality." Jelliffe, in an article on pre-dementia precox, describes this so well, that I will quote a passage:—

"My own observations of patients whom I have known intimately since childhood have shown that the paranoid dement in particular has been rather abnormally brilliant, but with the lights turned inward rather than outward. They were extremely unpractical in the use of their hands, or in any adaptation to material ends. They were utterly unable to observe with accuracy anything physical or material, for their minds were constantly turned in upon their own meditations. They were all unready to adapt themselves to uncongenial environment. . . They were subject to fits of abstraction, when they would not hear or see what would attract a normal youth. They were usually irritable to their families, but most desirous of being thought either amiable or brilliant by strangers. They were abnormally sensitive and suspicious, and most were prone to discuss deep, unsolvable questions."

It can scarcely be claimed that all such children as have just been described are really partially developed cases of dementia precox, but there is very little doubt that in such children we have a very fertile field for the development of the disease. If physicians would bear in mind that such children, especially where there is a known hereditary taint in the family, are in danger, and would take steps to prevent further development, a tremendous amount of good could be done.

You may easily imagine from this that dementia precox is a disease of childhood, and though that is essentially true, many cases show the first symptoms much later. The fact that in a large percentage, however, the trouble first appears at or about the age of puberty or of adolescence, and in many other instances during pregnancy or the menopause, has led many psychiatrists to contend that it is in reality a product of auto-intoxication, probably caused by some internal secretion of the testicle or ovary.

Considerable investigation is being done in this line, and more light may be shed on the etiology.

The onset of the typical symptoms of the disease is very gradual, and though cases of an abrupt onset are reported, it is very seldom that such are substantiated by careful investigation. Loss of ambition, indifference, sudden and unaccountable fits of temper, suspiciousness, and a desire to be left alone by former friends and companions,—all of these are typical symptoms of beginning dementia precox. Inability to concentrate the attention, lack of judgment and the habit of shifting from one line of work to another, are other symptoms. If there are delusions, though these are not usually among the early symptoms observed, they are apt to be especially noticeable because they are silly. I will not attempt to describe the later symptoms, such as peculiar mannerisms, negativism, mutism, stereotypy, cataleptic conditions, etc., for they only appear when the disease is so far advanced that, as a rule, the patient has already been committed to an insane hospital.

A short account of a patient formerly under my observation will give an illustration of a fairly typical case of dementia precox:—

In this case there was a very marked insane heredity. The father is strong physically, but admits that he is very nervous. The mother was a patient at McLean, twenty years ago, and is at present a woman of very poor judgment and very emotional. She has recently had a nervous breakdown and went for treatment to a private sanitarium. A sister of the mother is at McLean, where she has been for some years. Another sister has been at McLean. A third sister who is in the West, has broken down mentally. A brother was never in any institution but was admittedly unbalanced. The patient's maternal grandfather died of apoplexy and his maternal grandmother had melancholia and died of paralysis.

On the father's side, the history was nearly as bad. An aunt is now a patient at Worcester, while his grandfather committed suicide and his grandmother died of tuberculosis. There is probably even more hereditary taint in the family history, as even this much was only admitted after very close questioning.

The patient himself was delicate as a child and very nervous. He had a strong temper and a stubborn will. He did what he wished and would take advice from no one. He seldom played with other boys, but spent his time working with machinery and electrical appliances. He was fond of music and became very proficient instrumentally. He liked school also, and as he was bright in his studies, was encouraged in this line and went to college, where he graduated with honors. While at college he kept up his music and took work at the Conservatory of Music. He neglected his own comforts, was very irregular about his meals and often did not get sufficient sleep.

After leaving college, he tried several pursuits but never kept at one thing for any length of time. He tried life insurance work, was for a time in a banking office, dropped his work entirely and read German for a few months, formed an orchestra of which

he was the leader, and worked for a time with the men destroying gypsy moths. He enlisted in the navy as a musician but soon disappeared. He was later found working in a machine shop and was arrested as a deserter. He was discharged from the navy because of his mental condition and was committed.

In this case, I believe that much could have been done to prevent his breakdown if he could have been properly held back and not allowed to have his own way in everything. Of course, with a family with such a taint, it is impossible to expect that proper judgment would be used in bringing up such a precocious child, and perhaps the only possible prophylactic measure would have been the prevention of the marriage of two such neuropathic parents.

The fault has been found with most of the text-books on mental diseases, that they go into great detail concerning the etiology, pathology and symptomatology, but are very unsatisfactory in their recommendations for treatment. This is particularly true when the disease in question is dementia precox. White, at the head of the Government Hospital for the Insane, at Washington, whose "Outlines of Psychiatry" is used as a text-book in many of our schools, says, "These cases will, of necessity, have to spend most of their lives in a hospital. It is, therefore, desirable to educate them as early as possible in good habits. They should be encouraged to some form of education, preferably out of doors. Under the influence of hospital surroundings and farm life these cases may get on very comfortably and the dementing process be considerably retarded." This is all he has to say about treatment, with the exception of advising the correction of any functional abnormalities.

The text-books, however, are written as a rule by hospital men, and as they seldom see cases of dementia precox until they are fairly well advanced toward the hopeless later stages, it is not to be wondered at that their views are so pessimistic. If we are treating a case of yellow fever and do not begin treatment until the appearance of black vomit, about all we can do is to arrange for digging the grave.

Let me quote once more from White: "It is to be hoped that some day we shall have a sufficient understanding of character to be able to pick out those types liable to develop psychoses and to protect them from that class of stresses that they are least able to withstand. At present we can hardly be said to approximate to this. The neurotic child, however, can be recognized, and should be safeguarded, especially throughout school life and the period of puberty and adolescence. Some day, perhaps, competent advice will be sought by parents as to the best methods to be employed in the rearing of their children. Until then we are largely helpless in the matter of prevention."

Here is the point that I want especially to emphasize. The man in general practice is the one who can do this best. Those of us who are

specializing in this work must keep in closer touch with the general practitioner and encourage him to discover these cases early and begin treatment before irreparable damage is done. These same men in general practice, commit patients to our insane hospitals, but how many of them ever visit the hospital to follow and watch the patients they send there? Perhaps they feel they would be intruders, but I am sure they would be welcomed at any of our hospitals.

Children, whose parents or family have a marked neurotic taint, especially if they show signs of precocious brilliancy, should be closely watched and kept from unnecessary stress. In school they should be held back, and not encouraged by ambitious teachers and admiring parents to outstrip their comrades. Instead, they should be compelled to keep out of doors and enter into games with other children. Bashful little "shut-ins" should be coaxed out of their shells and encouraged to make friends. Those who show especial aptitude for music or art, should not be allowed to spend too much time with these studies at the expense of other necessary, though more prosaic pursuits, for it must be remembered that there is a very thin partition between genius and mental trouble. The child's environment should be noticed. If, as is often the case, it is an only child, it is often well to advise a boarding school, for with all the well-known disadvantages, the close association with other children is better than being too much with "grown-ups."

One other way in which the general practitioner can do yeoman service, is by advising against marriage in every case where it is feared that some neurotic taint might be transmitted to future generations. We are not justified in saying "Marry if you wish, but don't have children." Many a marriage has been unhappy because of an unsatisfied yearning for children. Advice on this subject from the family physician is much more often followed now than formerly, largely owing to the campaign of education carried on by such organizations as the National Committee for Mental Hygiene.

While on the subject of treatment, I wish to make brief mention of the latest development in the treatment of mental diseases. Probably for the very reason that writers on insanity have so little to suggest in the way of treatment, they are apt to follow any new fad that offers hope. The latest fad is psychoanalysis, and though it undoubtedly has much of good in it, especially in the treatment of hysteria and neurasthenia, I am much opposed to its use in cases of dementia precox. Without going into its sexual aspect, which repels many of us, it seems to me that dementia precox patients are all too introspective anyway, without any further encouragement. Personally, I have seen this treatment used on only one case of dementia precox, and the apparent results were very bad.

As I said early in this paper, the prognosis in dementia precox is considered bad. However,

recently, numerous recoveries have been reported. Many of these have been for private hospitals, as is to be expected, for they have the advantage of receiving patients early, before the family would be willing even to think of a state hospital. Many of these recoveries would probably show some deterioration on careful examination, but if they are able to return to their homes and lead useful lives, why are they not just as properly classed as recoveries as cases of manic-depressive insanity when the expected usually happens, one or many recurrences.

DIABETES AND SURGICAL OPERATIONS.

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It is at present an acquired fact, that diabetics may be submitted to operations of vast import with a successful outcome. To give a general idea as to what can be accomplished I will cite a few cases at random. Chavannaz has operated on five diabetics with one death. These cases were a laryngeal carcinoma, death eight days later; malignant disease of both ovaries, cure; castration for orchiepididymitis, cure; two amputations at the thigh, cure by first intention. Caralp (*Thesis*, Bordeaux, 1912) records one amputation of breast by Willy Meyer's method for an ulcerated carcinoma of breast, cure; three amputations at thigh for diabetic gangrene, all recovered; two hysterectomies for fibroid, both recovered; one palliative curettement for cancer of cervix uteri, cure; five trepanations for mastoiditis, with two deaths. The fatal cases were due, in one to old age, the patient being 76 years old; the other presented acetone in the urine. Richard operated on a buccal cancer successfully, Redard an epulis, Israel several cases of renal cancer and a suprapubic cystotomy, without any deaths. To these cases I may add six of my own, namely, one amputation at thigh for diabetic gangrene, death; one suprapubic prostatectomy, recovery; one strangulated hernia, and one amputation of the great toe and excision of two carbuncles, all successful.

Now, although diabetics are operable, the chances of success are naturally the greater when they have been first submitted to an antidiabetic diet in order to reduce as much as possible the glycosuria. This diet should be followed until the patellar reflex has returned, if it was found absent. The treatment should be very minute in all details, although it must be admitted that operation has been successful in instances in which time has not permitted a long

period of diet and antidiabetic treatment. It goes without saying, that when the operation is not urgently indicated one should carefully prepare the patient, selecting either Bouchardat's or Cantani's regimen as being the most rigorous.

My cases were submitted to a diet of broiled meat, potato and gluten bread, with the administration of bicarbonate of soda and Vichy water. Antipyrine and lithium carbonate are also of value. The present-day diet generally employed seems to be roasted or broiled meats, purée of green vegetables and gluten bread. This regimen is advantageous, inasmuch as it diminishes the hyperglycemia. Alkalines particularly favor oxidation of organic substances and by their use the urine becomes less dense and less acid, the urea increases in amount, while the uric acid and albumin decrease, likewise the amount of sugar present.

The drugs resorted to as antidiabetic are more for the purpose of reducing the glycosuria than the hyperglycemia. Opium checks the thirst, diminishes the hunger and limits the glycosuria. It may be given in the form of Dover's powder, morphine or codeine combined with belladonna. In debilitated patients strychnine is useful, or when there is a diminution of sight or atony of the digestive functions. Valerian and arsenic act on the metabolism. The former drug has a favorable action on the polyuria and polydipsia, it also decreases the urea. Arsenic acts as a vascular tonic and influences metabolism, but its results are, on the whole, doubtful. In moderate doses, glycerine may counteract the loss of flesh. Ricord, long ago, prescribed iodine in sudden recurrence of diabetes, while the tincture of iodine, 5 to 20 drops at meals, has been given by Bérenger-Férand, and the syrup of the iodide of iron by Bouchardat.

Various acids have been prescribed, such as carbolic, nitric, salicylic and phosphoric, likewise, sodium salicylate, chloral, cocaine; astringents, like alum, tannin, etc.; oxidants, such as potassium chlorate or permanganate, inhalations of oxygen, etc. Antipyrine has given remarkable results, but as soon as it is stopped the sugar returns in the urine. The hydrochlorate and valerianate of quinine have given good results. Bar and Blum praise glutaric acid as a very active antiglycosuric remedy. But besides a proper diet, I believe that bicarbonate of sodium, the salts of lithium and antipyrine, represent the surest means of controlling the morbid process.

When once we have the diabetes under control, the analysis of the urine having shown a constant decrease in the amount of sugar from the effect of treatment, and having revealed no evidence of a serious lesion of the renal or hepatic glands, the reflexes being normal, what is the next step to be taken by the surgeon? I am firmly convinced that the diabetic diathesis plays no part in the complications arising after a surgical operation. It only acts by depressing the organism and facilitating infection, the