

*Influenza and Neurosis.** By GEO. H. SAVAGE, M.D.

Griesinger says: "The onset of psychosis after influenza follows in all cases after the disappearance of bodily symptoms, and when the increased temperature has passed off. The character of the psychosis varies from slight to profound depression, hallucination, typical maniacal disorder, and the like."

"In all cases the bodily ailment only plays a part as cause of the disorder, it being on the one hand a predisposing cause, a reduction of nervous or bodily power of resistance; or on the other, the last shock to upset an unstable system. There is no simple and special neurosis depending on influenza alone, but various forms of neurosis may arise in predisposed subjects. Influenza alone does not produce insanity." The above is the opinion of the editor of the last edition of Griesinger, and in the main it sums up my experience.

I shall not occupy your time in considering the various theories of the causation of the disease; it must suffice for me to say that it produces nervous complications much more commonly than do the continued fevers, and the resulting disorders differ greatly from those following such fevers. Its effects most resemble those following diphtheria, though in many ways the symptoms resemble those depending on syphilis or lead poisoning.

It appears to attack the nervous system in those who are already failing along the nervous lines, as well as in those who by inheritance or acquisition are nervously unstable.

Thus the grave neuroses have in my experience been most common in persons who from excess or injury have damaged nervous systems, in those who showed signs of senile nervous changes, in those who had been alcoholic, or had suffered from constitutional syphilis, or in those who had had previous attacks of insanity, or had suffered from allied neuroses.

In my experience, too, the attack of mental disorder produced by influenza has resembled previous attacks which have occurred in the same person from other causes. Thus a patient subject to recurrent mania may have an attack produced by influenza, and another who has had previous attacks of melancholia may suffer from mental depression as a result of influenza.

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Influenza occurring in predisposed subjects may give rise to psychosis *directly* or *indirectly*. The nervous symptoms may follow directly on the influenza, or may follow on disorder of the bodily functions; in some patients very grave nutritional disorders arise, there may be gastro-intestinal irritation causing sickness and purging with exhaustion, leading to mental disorder; profound alterations in the circulation also occur, and in most of the insane patients I have found marked deviations from health in the pulse rate. There is anæmia in some cases, and disorder of the menstrual functions in others; syncopal attacks have been met with, and some seizures which were more epileptic than syncopal have occurred at the onset or during the progress of the mental disorder.

After influenza various nervous symptoms may arise pointing to implication of the nervous system, and these symptoms need proceed no further, but, on the other hand, they may be the starting points of more developed mental disorder.

We all recognize *sleeplessness* as one of the most marked symptoms of mental disorder, and this symptom has been in my experience very frequent with and after influenza. This may rapidly lead to other symptoms of nervous instability and malnutrition; next to sleeplessness, *neuralgia* has been the most common complaint, and it is interesting to notice that this has generally picked out the nerves which have previously suffered, or which have already some irritant affecting them. Thus the patient who has had sciatica has a recurrence of this, while the sufferer from "muscular rheumatism" has a return of this pain, and the patient with an exposed dental nerve will suffer in the various branches of his fifth nerve; the alcoholic and the ataxic patient will suffer from peripheral nerve pain. Rarely, however, does the sufferer from migrain have this started by influenza, and I shall refer to this fact again later, nor have I found that the epileptic has any increase in the number or severity of his fits, but I need the experience of general asylum men to verify or correct this statement.

Besides nerve pain there *may be loss of power*. In some cases rather rapid general paralysis has developed, and in others there have been paraplegic symptoms, which have in the end passed away completely; in such patients there has been loss of power in lower limbs and defective control of bladder and rectum.

Various forms of insanity may follow influenza, and there is no direct connection as a rule between the gravity of the influenza and the neurotic sequelæ.

In some cases, however, with influenza there has been delirium with the increased temperature, and this delirium has given rise to acute delirious mania.

I have seen several such cases, in some there being further complications, such as the parturiant state or alcoholism. In some the acute delirious mania has proved to be the acute onset of general paralysis of the insane.

Other acute forms of mental disorder have been met with following the acute stage of influenza; thus acute delirious melancholia, acute stupor, and acute delusional insanity, the last being in many respects like some of the more ordinary forms of acute confusional insanity, which may occur after the continued and other fevers.

In such cases after a sharp attack of influenza the patient, who generally in my experience has been young, has a period of sleepless restlessness, which is followed by a state of general mental confusion, the patient looking and acting as if he were in a dream; his whole attention is occupied by subjective sensations, and it is difficult to get him to attend to what is said to him; such cases generally have an irregular and often a rapid pulse.

Though acute mania, ranging from delirious mania to simple emotional disorder, may follow on uncomplicated influenza, yet in my experience a very large number of cases of mental breakdown have occurred in patients who have had pneumonia, or who have had other attacks of influenza.

Though any form of mental disorder may occur, mental depression, with various forms of melancholia, have been the most common. This depression almost always begins with sleeplessness, there is loss of appetite, and very commonly associated there are marked suicidal tendencies. A very large number of suicides during the past year have had influenza as one cause.

The melancholia may come on almost at once, but more frequently follows the influenza after some interval; so much has this been the case that very often the connection between the two has not been evident. Yet I believe the real relationship may be made out by linking the neurotic symptoms which arose with the influenza with the earlier signs of psychosis. Here, again, I would call attention to the frequency with which I have met a rapid pulse and a rather hot, dry skin in these melancholic patients. There is no special form of melancholia related to influenza, and though the majority of such cases recover they have been very tedious, and not without danger both to life and mind.

Such patients have often succumbed to a second attack of influenza, they seeming to be too much depressed vitally to overcome a second severe illness. All degrees of mental stupor have been met with, and though slow in their progress have generally ended satisfactorily.

The acute delusional cases have frequently led to the idea that the hallucinations and delusions must have been of long duration, and have thus given rise to an unfavourable prognosis which has proved to be wrong. A fair number of "nervous" patients have, after an attack of influenza, proved to be true cases of delusional insanity, and have remained subject to delusions of persecution and the like. Among such cases I have met several women who about the menopause have become insanely jealous or suspicious.

Though less favourable, such cases may recover. The most serious effect of influenza has been the starting into activity symptoms of general paralysis. In one case a youth after a neglected attack of influenza developed what Clouston has called developmental general paralysis, there having been no signs of the disease before. This patient came of a very unstable family.

In more instances, men of about 40, who were already showing signs of nervous wear, rapidly developed the symptoms of general paralysis after an attack of influenza. This was specially seen in men who had suffered from syphilis, alcoholism, injury, or had had great worry. The course of the disease was in no way modified by the cause.

Epileptic fits have been started by influenza, but I cannot give any case in which the epilepsy has become established as a result of the disease. In the same way glycosuria and possibly diabetes may follow on an attack of this disorder.

It has been said that the onset of influenza may modify mental symptoms in patients already insane. I have seen only a very few such cases, and the modification of the symptoms has been temporary only. On the other hand, I have met with some interesting cases in which neuroses of long standing have been for some time relieved thus; I have met with two cases of nervous deafness in which the deafness passed off with the influenza, though I must own that in more cases temporary deafness followed the disease.

I have also seen cases of spasmodic asthma relieved for the time, and in one or two patients who have suffered from migraine this symptom has not recurred after the attack of influenza, but one must wait for some time before one can look upon these as more than temporary reliefs.

And now, gentlemen, to conclude, the object of this paper was rather to obtain the experience of you who have had such good opportunity for seeing the effects of this epidemic in different parts of the country; many of you have, doubtless, had some experience in yourselves of the depressing effect of the malady, and may be able to contribute to the general stock of knowledge, and give some useful hints on the pathology and treatment of a disease which has rightly been called a pest.

Some Points connected with Criminals. By JOHN BAKER, M.B., H.M.C. Prison, Portsmouth.

Of late years considerable attention has been directed to the science now commonly alluded to as criminal anthropology. The workers in this field have been mainly continental alienists, notably the Italians, of whom one of the most prominent is Professor Lombroso; and the writings of Mr. Havelock Ellis have brought the subject into prominence in this country.

The main conclusions of the Italian school are that the born criminal is a being who, by reason of a combination of bodily and mental peculiarities, belongs to a distinct type, that he is morally insane, and, therefore, ought not to be punished as a responsible, but treated as a diseased individual.

These views have met with opposition from several German authorities, amongst others, Kirn and Lutz, and it is probable there will not be found many in this country disposed to accept them in their entirety, for, as Morrison states in "Crime and its Causes," it has not yet been proved that criminals present any distinct physical conformation, nor can it be established that their mental condition is one of insanity or verging on insanity, although, taking them as a whole, the criminal classes are, it is quite true, of a humbly-developed mental organization.

Anyone who is acquainted with prison life cannot help being struck with the fact that there is a gradual descent in the mental scale from the occasional criminal, whose crime is the result of imprudence or misfortune, to the insane criminal, who is the victim of positive mental disease. Judging them, therefore, according to the measure of their mental capacity, they may be broadly divided into four classes:—(1) The occasional criminal, who is, to all intents