

*Conclusion.*

Whether the above facts, to which many more might be added, show or not that genius and insanity belong to the same category, they indicate at least that they touch in many points. Thus the frequency of delirium, the numerous signs of degeneracy, the commonness of epilepsy, precocity, and melancholia, the tendency to suicide, and the special character of inspiration favour the idea that genius is a mental and degenerative disease.

If this conclusion is admitted, let no one suppose that what is high and noble in genius is lessened in value. Any analysis that may show the closest relation to insanity, or even crime, cannot change genius itself.\*

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*A Note on Cocainism.* By CONOLLY NORMAN, M.D., Richmond Asylum, Dublin.

The dangers to be apprehended from the abuse of cocain are probably hardly yet quite realized, at least in this country. A great deal of harm has undoubtedly been done of recent years by the use of cocain as a help to break off the morphia habit. An exaggerated estimate of the assistance to be obtained from the former drug has been formed by such writers as Freund, and although Lewin and Erlenmeyer have warned us not to fly from Scylla to Charybdis, still it is to be feared that the notion lingers that cocain may be used advantageously and safely for this purpose. Nothing can be more mistaken. Cocain is more seductive than morphia; it fastens upon its victim more rapidly, and its hold is at least as tight. Cocain solutions are probably somewhat too freely prescribed in cases of disease of the nose and naso pharynx. Patients who use the drug in this way become very soon acquainted with its agreeable effects. Several cases have been recorded by American authors of cocain habit arising thus. That cocain has not been even more extensively misused is probably due to its being still a comparatively new drug, and also in part to its costliness. Up to the present time the largest number of its victims appear, unfortunately, to have been medical men.

Cocain owes its special dangers to three causes. First, it is particularly treacherous. Secondly, it produces early mental

\* The writers of signed articles are alone responsible for their statements and opinions.—Eds.

breakdown, both in the moral and intellectual spheres. Thirdly, it is intensely toxic, bringing about destructive tissue change after a comparatively short period of abuse. Taking the last first, we know that alcoholic poisoning is usually a slow process, while morphia may be taken even in very large quantities for years without producing any serious structural changes in the viscera. In fact we recognize no distinct pathological results of morphia poisoning. On the other hand the marasmus of chronic cocain poisoning, appearing early and developing with extreme rapidity, is but one indication of the serious organic changes that are produced. Convulsions, similar, as Richet points out, to those of cortical epilepsy, have been noted in a great number of cases. In at least one recorded case death occurred in an epileptiform attack. In animals poisoned with cocain remarkable rise of temperature has been observed by Mosso, Reichert, and others. Acute poisoning in animals kills by asphyxia, chronic poisoning, as Zanchevski shows, is accompanied by albuminous degeneration of the ganglionic cells in the medulla oblongata and spinal cord, as well as of the nerve cells of the heart ganglia, and of the liver cells. In other more advanced cases this author has found atrophic changes with vacuolation in the cells of the medulla and cord, fatty degeneration of the muscular fibres of the heart, and atrophy of the liver cells. Degenerative changes also occurred in the arterial coats, particularly in the spinal cord. Perhaps organic changes similar, but less in degree, account for the slowness and difficulty in recovering from the cocain habit, and the liability to dangerous collapse which exists during the process of withdrawing the drug.

The treacherous and insidious character of cocain results from the fact that when taken in small doses it produces at first apparently nothing but a slight degree of exaltation, a sense of well-being, a feeling of mental and bodily activity, of general satisfaction and good humour, that is most agreeable. There is no mental confusion which the consumer of cocain is conscious of, and the only overt symptom he betrays at this stage is more than natural talkativeness. The hypnotic effects when they appear are not overwhelming, and there is no headache, no nausea, and no confusion next day. Thus cocain is probably the most agreeable of all narcotics, therefore the most dangerous and alluring. It is to be feared that these peculiar qualities may indeed conduce to raise this drug in the future to the bad eminence of being, as Erlenmeyer says, the third great scourge of the human race (alcohol and opium being the

first and second). Like several other observers I have satisfied myself by experiments on healthy persons that the agreeable results described actually follow the ingestion of small doses of cocain, and this fact impresses one strongly with a feeling of how seductive this drug would be to the neurotic or debilitated. Of course, as is the case with all narcotics, small doses soon lose their effect, and hence a rapid increase is necessary.

The rapidity with which mental symptoms of a grave character appear is remarkable in cases in which increasing quantities of cocain are taken. Within three months marked indications of degeneration, loss of memory, hallucinations, and suspicions deepening into persecutory delusions have been found.

I have seen three cases of cocainism. For certain reasons I am unable to describe them in as much detail as I should wish. In one, cocain had been tried as a substitute for morphia, and the patient soon found he had taken unto himself seven devils worse than the first. In another cocain had been originally prescribed for a painful affection of the nose. In a third a patient sought a new stimulant after having from time to time tried to combat "neurasthenia" with alcohol and morphia. In the first and third cases there was a very bad family history. In the second there seemed to be no contributing agent, except, perhaps, overwork. In the first case the mental symptoms, which appeared about a year and a half after the use of the drug had been begun, were (1) hallucinations of hearing with persecutory ideas. Patient constantly heard voices making vile and indecent charges against him. Sometimes he accused those about him of giving utterance to these abominations, at others he fully recognized their subjective and morbid nature. (2). Sexual excitement of a depraved nature leading, though the patient was no longer young, to frequent very irregular modes of gratification. (3). Loss of the sense of the passage of time. This patient, after several efforts to break off the habit, and several relapses, went from bad to worse. The delusions became more general and more organized, and he was now confined in an asylum suffering apparently from chronic paranoia. The second patient was an elderly man engaged in an active and arduous business. After six months' use of cocain he fell into a state of such mental hebetude and weakness of memory that he was unable to attend to his work. His sleep was broken and irregular. He suffered from trance-like conditions, in which he did and said things of

which he had no subsequent recollection. He was tormented by sexual excitement, and sometimes sexual hallucinations occupied his mind in his half-dreamy state. After desperate efforts, accompanied by much depression and distressing debility, he shook off the cocain habit, and is, at least for the time, cured. The third patient was a young man with a strong neurotic taint, who had been personally addicted to every form of dissipation, and whose health had consequently suffered. He took to cocain out of a whim, or the mere desire for a fresh intoxicant. It was impossible to be sure how long exactly he was addicted to the poison, or to what doses he went, as he was wholly unreliable, but there is reason to think that he had not been taking cocain for a longer period than six months when he came under notice. He was then pale, emaciated, with dilated pupils, muscularly feeble, mentally depressed, suspicious, and restless. His memory was failing. He was furtive and shifty in manner, and he had among other things quite forgotten to tell the truth. He thought he was dying, and that everyone saw his vice in his face. He had vague notions that his relatives were against him. The immediate cause of his seeking advice was the occurrence of visual hallucinations, resembling those of delirium tremens—small animals creeping about him, particularly at night in bed. Sometimes he spoke collectedly of these as recognized hallucinations. It was satisfactorily made out that he had not been taking alcohol in excess within several months. Abstention from cocain was accompanied by a pitiable condition of querulous depression, but was, nevertheless, followed by very marked improvement. Before recovery was complete the patient changed his residence, and was lost sight of. In this case the sexual passions seem to have been always urgent, but it appeared that cocain had the effect of at first very much exciting and finally depressing their activity.

It is important to observe that undue sexual excitement, abnormal voluptuous sensations, and the like, have been noticed as symptoms by several authors. Richardson records a case occurring in a modest, married woman who exhibited violent erotic delirium after the application to the nasal cavity of a small quantity of a ten per cent. solution of cocain. In several chronic cases impotence has been found. Very probably the occurrence of these disturbances in the sexual region contribute further to the rapid mental degradation which marks this vice. Dr. Thornley Stoker, of this city, first pointed out to me the frequency of sexual troubles in the cocain habit, and my experience quite confirms that gentleman's previous