

April 2d. He walks very well. The speech is more distinct. There is less stammering and less dizziness. Has had no spasm for six days. The discharge from the tube remains the same in quantity and character.

It seemed probable that this condition would continue for some time. On this account we determined to make another attempt to obliterate the cyst. Accordingly, a second operation was done on April 5th. The sinus was enlarged by an incision in the scalp about one and one-half inches long. The cyst cavity was found to be about the size of a walnut, lined with whitish, sloughing tissue and granulations. The depth was not accurately made out, from fear of injuring the brain. The sloughing tissue was dissected from the walls, and the cavity thoroughly cleared out. The whole wound was made V-shaped and packed with iodoform gauze.

There was no disturbance following this operation. The patient was up on the second day, and continued to improve. A slight spasm of hand occurred on the sixth day. The dressing was changed daily; and in fifteen days the sloughs had all come away and the cavity was lined with pale granulations.

April 21st. The patient talks well, but drags the right foot in walking. The cavity is packed lightly and is filling up with granulations.

April 26th. Patient had two severe spasms. Talks well, but forgets words.

April 30th. Patient has had one slight spasm in last four days. He was discharged from the hospital, as he desired to go home, and could have the dressing done at home.

I heard from his friends that he failed gradually after leaving the hospital, and died in about three months.

From the fact that this patient gradually failed and died after the cyst was practically cured, I do not feel at all certain that the disease was simply a cyst, but suppose rather that it may have been a cyst in a glioma, although the brain about the cyst seemed to be perfectly normal. One of the most interesting points in the case was the almost immediate recurrence of the symptoms whenever the fluid was allowed to collect in the cyst.

### INCREASE OF INSANITY AND CONSUMPTION AMONG THE NEGRO POPULATION OF THE SOUTH SINCE THE WAR.<sup>1</sup>

BY THOMAS J. MAYR, A.M., M.D.,

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DURING the last ten or fifteen years there appeared various contributions on the disproportionate increase of insanity and consumption among the negro population of the South since the close of the Civil War. This literature<sup>2</sup> emanates from the best minds in the

medical profession of the South; and, believing that it pertains to a question which is of the most vital concern to social science, and also believing that it will enlist the attention of every student who is interested in the physiology of man's development, and in the prevention and cure of disease, I have seen proper to bring it before this meeting for a full and free discussion. I believe that such a consideration of the facts and figures which are here presented will serve to set into a new light the mechanism of some of the most powerful factors which are engaged in the production and perpetuation of two of the most deadly enemies of mankind.

In speaking of the increase of insanity in the colored population of Georgia, Dr. Powell, Superintendent of the Georgia Lunatic Asylum, makes the following comments: "There has been a radical change in the susceptibility to certain diseases, notably insanity, phthisis and similar maladies in this class of our population, from which they were almost entirely exempt up to 1867. . . . The census of 1860 will show that there were only 44 insane negroes in the State of Georgia, or one insane negro in every 10,584 of the population, and consumption in the full-blooded negro was rarely seen. The census of 1870 shows 129 insane negroes in this State, or one to every 4,225 of the population. The census of 1880 gives 411 colored insane, or one to every 1,764 of the population; while in 1890 there were 910 colored insane, or one to every 943 of the population."

Dr. J. F. Miller, Superintendent of the Eastern Hospital of North Carolina, for colored insane, says: "From close personal observation, embracing a professional life of nearly forty years among the negroes, and from data obtained from professional brethren in different sections of the South, I have no hesitancy in declaring that insanity and tuberculosis were rare diseases among the negroes of the South prior to emancipation."

The Eastern Hospital of North Carolina was opened August 1, 1880, for the exclusive accommodation of the colored insane, and this same writer furthermore states that during the first year there were admitted 91 insane negroes, which number represents the accumulation of this class of patients in that State during the first decade and a half after the Civil War. In 1885 there were under treatment in this institution, 144; in 1890, 244; in 1895, 307, and in December, 1896, 377 insane negroes.

Dr. J. W. Babcock, Superintendent of South Carolina Insane Asylum, says: "We cannot lose sight of the fact that on the basis of the census, as compared with insanity in the whites, mental disease in the negro has arisen from one-fifth as common in 1850 to one-half as common in 1880 and in 1890."

Dr. Miller also states that in the hospital in his charge the average mortality from consumption since its opening to 1896 is 25 per cent. of the total number of deaths. However, the death-rate from this disease was much less in its early management. Thus, up to 1884, it caused 14 per cent. of the total number of deaths; while in 1895 it produced 27 per cent. of all the deaths, and this in spite of a reduction of the general mortality-rate.

Dr. Powell (*op. cit.*) says: "From observation and of the Negro of the South. By Dr. J. F. Miller, Superintendent of Eastern Hospital, Goldsboro, N. C. Published in North Carolina Medical Journal, November 20, 1896.

Private Correspondence.

<sup>1</sup> Read before the Section of Neurology and Medical Jurisprudence of the American Medical Association, at the Philadelphia Meeting, June 3, 1897.

<sup>2</sup> Report on the Increase of Insanity and its Supposed Causes. By Dr. T. O. Powell, Superintendent of the Lunatic Asylum of the State of Georgia, October 1, 1886.

Tuberculosis in Asylums. By Dr. J. W. Babcock, Superintendent of State Hospital for the Insane, Columbia, S. C. Published in American Journal of Insanity, October, 1894.

The Increase of Insanity and Tuberculosis in the Southern Negro since 1860; Their Alliance and Supposed Causes. By Dr. T. O. Powell, Superintendent of the Georgia Lunatic Asylum, November 21, 1895.

The Effects of Emancipation upon the Mental and Physical Health

investigation I am forced to believe that insanity and tuberculosis are first cousins, or at least closely allied. The sudden outburst of insanity with the colored race of the South came associated with tuberculosis, hand-in-hand, keeping pace one with the other; hence, in obtaining histories of cases as they are brought to our institution, the hereditary predisposition to consumption is carefully inquired into. The prognosis of phthisical insanity is unfavorable. I am not surprised at any time to find insanity in a family strongly predisposed to phthisis, and phthisis in a family strongly predisposed to insanity."

Dr. T. J. Mitchell, Superintendent of the Mississippi Lunatic Asylum (cited from Dr. Miller's able paper), states that among the negro patients of this institution the following number of deaths occurred in the years named: In 1892 there were 44 deaths, and 14 of these, or about 32 per cent., were caused by consumption. In 1893, there were 29 deaths, and 16 of these, or about 55 per cent., were caused by consumption. In 1894 there were 40 deaths, and 18 of these, or 45 per cent., were caused by consumption. In 1895 there were 35 deaths, and 11 of these, or about 31 per cent., were caused by consumption. In ten months of the fiscal year of 1896 there were 48 deaths, and 20 of these, or about 48 per cent., were caused by consumption. These data show that about 42 per cent. of the total number of deaths in this institution were caused by consumption during these years; and estimating the death-rate among the white population from this disease at 20 per cent., the death-rate among the insane negro population is 22 per cent. greater.

Dr. E. D. Bondurant, Assistant Superintendent of Alabama Insane Hospital (cited from Dr. Miller's paper), says: "During three years and nine months, beginning October 1, 1890, 295 deaths occurred among the 1,700 patients treated in this Hospital. Of the 179 deaths among white patients, 51, or 28 per cent., were due to tuberculosis; of 116 deaths among negro patients, 49, or 42 per cent., were due to tuberculosis. In addition to this, a study of our clinical records discovers the fact that in the colored race the disease assumes a much more active and rapidly progressive form, the average duration of fatal cases being markedly shorter in the negro."

Dr. W. H. Barnes, First Assistant Physician in Arkansas Lunatic Asylum, states, in a private communication, that neither insanity nor pulmonary consumption were especially prevalent among the negroes while they were slaves.

Dr. R. J. Preston, Superintendent of the South-Western Hospital of Virginia, says, in a private communication, that there has been a great increase in both insanity and phthisis among the negro population since emancipation.

Dr. Jas. D. Moncure, Superintendent of the Eastern Hospital of Virginia, informs me, in a private communication, that the health of the negro with regard to insanity and phthisis was very much better before emancipation than since. Before that time there were about 60 insane negroes in the asylums of Virginia. Now (1896) there are over 1,000. In all hospitals the insane seem readily to contract tuberculosis; and this is a frequent cause of death among the insane.

From the foregoing the following conclusions may be safely drawn: (1) that insanity and consumption were comparatively infrequent in the negro race be-

fore the war; (2) that both of these diseases have disproportionately increased in the same race since the war; and (3) that in all probability the causes which give rise to one of these diseases also produce the other.

Now what is the cause for this rapid and remarkable transformation in the health of these people during the short period of three decades? Why should insanity and consumption develop side by side, and at an equal pace, and why should the former frequently precede the latter in the same individual? Are these diseases acquired through contagion, or are they due to other conditions and influences inherent in the changed environment of this race? These are questions which appeal to the very root and marrow of this matter; and until we solve them we cannot hope to grapple successfully with either the cure or prevention of the diseases under consideration.

First, in regard to contagion, it is needless to say that even at present there is not a trace of well-grounded suspicion that insanity is acquired through contagion; and hence nothing need be said on that side of the subject. In the next place, is there any evidence to show that consumption's contagion was lying dormant before the war, and that it sprang into sudden and most virulent activity after the close of this period? So far as I know there is none, and aside from the untenability of such a position Dr. Powell testifies (*op. cit.*) that the opportunity for contagion was most favorable before the war. "It should be remembered," he says, "that up to the war and during the war the negroes were the principal nurses for the consumptives of the South. They washed the spittoons, bedding and clothing of the consumptives, swept and dusted their rooms, and in many instances slept in the rooms with them—literally living with them night and day, and were more exposed to the tubercle bacillus than now as a general thing: still they resisted the disease."

I think the whole question of the origin of consumption will be solved most easily if we study the causes which lead to both insanity and consumption together; for though on superficial inspection these two diseases have nothing in common, yet deeper study teaches us that the former is a perfect analogue of the latter. During the last ten years I have been engaged in collecting material—clinical, experimental and pathological—which demonstrates that pulmonary consumption is not primarily a disease of the lungs, but a secondary manifestation of impaired integrity of the nervous system in general, and of the pneumogastric nerves in particular.

This view did not originate with me, for in 1842 Cheneau attributed this disease to disordered pneumogastric innervation. In 1850 Dr. J. C. Holland defined pulmonary consumption as a disease of the nervous system. In 1862 Dr. Laycock stated that defective pneumogastric innervation consequent upon a loss of cerebro-spinal power was a very common predisposing and exciting cause of phthisis. Dr. Clifford Allbutt said in 1871: "The more I study this, the more I am satisfied that the lung mischief is also a neurosis—by which I mean that the lesion is one not originating in the local tissues, but in the nervous system." In 1891 Dr. T. S. Clouston delivered a course of lectures in which he stated that facts "seem to show that if tuberculosis cannot itself be called a neurosis, it is in most cases dependent for its exist-

ence on a trophic neurosis, or has the closest affinity to it."

There is also a richness of clinical material scattered throughout the literature of medicine which confirms the pathological view that phthisis is a neurotic disease. Thus, in my *brochure*<sup>3</sup> on "Pulmonary Consumption a Nervous Disease," I collected and tabulated a large number of cases of phthisis in which the pneumogastric nerves were compressed by tumors, aneurisms, or otherwise disintegrated, prior to the onset of the disease in the lungs. In other papers<sup>4</sup> since published, I believe that I have succeeded in demonstrating the following propositions concerning the close affiliation that exists between insanity and pulmonary consumption: (1) that both of these diseases are most liable to occur at the same age-period, that is, between twenty and thirty years; (2) that the family which is burdened with one is also liable to produce the other; this liability being greater in the case of insanity than in that of phthisis; (3) that they are both closely related in personal and family history to idiocy, hysteria, epilepsy, asthma, and to other diseases of the brain and the spinal cord; (4) that they are both produced by syphilis, alcohol, overwork, business vicissitudes, domestic trouble, mental anxiety, grief, disappointment and excesses of all sorts — in fact by any agent or influence, such as those named, which vitiate the brain or the nervous system; (5) that the insane, the idiotic, the epileptic, the hysterical, the asthmatic and the members of their families, are from three to eight times more prone to become phthisical than persons who are not burdened in the same way; and (6) that those who are confronted by a new and higher civilization, and who are compelled to adjust themselves to these new relations are excessively liable to fall victims to pulmonary consumption.

Let us now consider the question of the increase of insanity and of pulmonary consumption among the negroes in the light of these deductions, and see what interpretations can be given to the origin of these diseases. And in the first place we will discuss the effects on the nervous system which are wrought by a struggle between a higher and a lower civilization.

At the very outset it must be conceded that a struggle for existence even under the most uniform and favorable conditions is accompanied by considerable wear and tear of the body. What, then, is the outcome, if a lower is precipitated into the midst of a higher civilization? Civilization is an accumulation of force; and the older and higher the civilization the greater is its momentum. It is the meeting of two forces which differ in power and rate of motion. The higher civilization, backed by its many thousand years of organization and experience, cannot, except to its own detriment, change its upward career; and hence the lower must for the sake of self-preservation adapt itself, so far as this is possible, to the course and changes of the higher movement. The effort of adjustment between the two may be compared to an animal which is confronted by a new geological era to which it must either adapt itself or forfeit its existence. The mandates which come from the changed geological environment to the animal are no less real and imper-

ative than those which come to the negro from his changed surroundings.

If we fully realize that the negro came out of the darkness of Egypt and was brought face to face with a civilization — with its education, knowledge and inventions; its advanced sanitation; its innumerable arts, sciences and manufactures; its multiplicity of industries and employments; its burning life-struggles; and its proneness to vices and excesses of all sorts — it cannot surprise any one that in many instances he is unequal to the task of adjusting himself to these, and falls a prey to disease. The point of greatest importance here is the fact that the brunt of the battle in this contest falls on and vitiates the brain and nervous system, since these structures are the instruments through which his efforts are chiefly made to bring himself in harmony with his changed relations. He, therefore, becomes insane and phthisical because his nervous system is undermined by and disintegrates under strains and burdens which he is unable to resist or to counteract.

In regard to the effects of a changed social environment on the negro, Dr. Miller (*op. cit.*) says:

"The untutored savage, owing to a nervous organization less sensitive to his environment, can exist and be healthy in mind and body under conditions that will seriously affect the man of finer sensibilities from culture and education. The negro in slavery had 'no thought for the morrow,' wherewithal he should be fed and clothed. Nor did the claims of family press upon him to worry and affect his mind; no ambitious hopes stirred his brain as to the possibilities of his future; but 'far from the madding crowd's ignoble strife' he spent his quiet, humble life in his little log cabin, with his master to care for every want of self and family, in sickness and in health.

"It is an undisputed fact, known to our Southern people, that no race of men ever lived under better hygienic restraints. . . . Their habits of life were regular; their food and clothing were substantial and sufficient, as a rule; and the edict of the master kept indoors at night and restrained them from promiscuous sexual indulgence and the baneful influences of the liquor saloon. In sickness he was promptly and properly cared for by physician and nurse. Freedom came to him, and a change came over his entire life. Under his former manner of living he enjoyed a wonderful immunity from brain and lung trouble; and I confidently assert that the germs of these troubles came to the same man and race in consequence of his changed environment and the manner of his life which followed.

"In his ignorance of the laws of his being, the functions of citizenship, and the responsibilities and duties which freedom imposed, demands were made upon the negro which his intellectual parts were unable to discharge. In his former condition none of these things disturbed his mind. Immediately the restraining influences which had been such conservators of healthfulness of mind and body were removed, thousands left the quiet homes and regular life of the country for crowded and badly ventilated houses of the towns. These were often located in the midst of unhealthy surroundings, their occupants without regular employment eking out a precarious existence."

Dr. W. B. Barnes (before cited) says that the causes of the increase of insanity and consumption among the negro population are deprivation, exposure,

<sup>3</sup> Published by George S. Davis, Detroit, 1891.

<sup>4</sup> Pulmonary Phthisis in Relation to Insanity, etc. Medical News, July 16, 1892.

Toxicosis of the Nervous System as a Cause of Consumption. Journal Nervous and Mental Diseases, November, 1896.

poor hygiene, difficulty of self-preservation, and mental anxiety.

Dr. R. J. Preston (before cited) states that the increase of these diseases among the negro since emancipation is due to the cares of life which are thrown on them, bad hygienic surroundings, crowding together, and no restraint on dissipation and vice.

Dr. Jas. D. Moncure (before cited) states that this increase is owing to crowding into cities, improvidence in living, and exposure to contagion.

All the testimony goes to show, too, as has been intimated already, that the vices of alcoholism and syphilis are freely acquired by these people; and there is abundant evidence to prove that both of these influences have a special predilection for destroying the integrity of the nervous system, and in this way to bring about insanity and phthisis.

Touching on these infirmities Dr. Powell says (*op. cit.*): "The ultimate results of alcoholic intemperance in this race is to be apprehended, perhaps, more than from any other influence, from the fact that there is a tendency to alcoholic intemperance, not only on the part of the men, but also on that of many women. Could we be justified in expecting a perfect mental and physical organism from parents both of whom were drunkards?"

He also says that "the direct and indirect effects of syphilis constitute one of the leading factors in the causation of insanity in the colored race. The large number that are tainted with syphilis in some sections is really alarming. I have ascertained from reliable sources that on some of the large plantations where there is a great number of negroes, there are few of the adults that are sound or free from the taint of syphilis. I have conferred freely with quite a number of physicians who were actively engaged in general practice before the war, and they seem to be fully agreed in the statement that secondary or tertiary syphilis was almost unknown in the country negro at that time.

He also gives the following very interesting account of the ravages of consumption among a settlement of negroes on three adjacent plantations in the Southern part of Georgia, and which was communicated to him by Dr. J. C. Patterson, in whose experience it occurred. Prior to the war these negroes enjoyed remarkable mental and physical health: Consumption, insanity and similar wasting diseases were altogether unknown among them. At the time of their emancipation there were upon these three plantations, including children, between 400 and 500 as healthy individuals as could be found, and free from all hereditary taint or tendency to any disease whatever. The negroes, as a rule, remained on the plantations where they were born. It was not long, however, before syphilis appeared among them; and it gradually spread over these plantations, the disease in nearly all cases going into the tertiary stage. Some ten or fifteen years later consumption and insanity began among the adults, many of their children died from scrofula and tuberculosis, and it was the exception rather than the rule that the children lived. Bodily deformities and idiocy were frequent among them.

Viewing the present condition of the Southern negro, then, from the standpoint of his changed surroundings, and taking into consideration the structure of the body which is specially implicated in this

change, it is perfectly obvious why insanity should develop as a necessary sequence in this soil. Upon the same ground, and upon no other, can we explain why pulmonary consumption should follow in the wake of insanity, and also increase in frequency. The truth is that those who were able to realize all the factors which would be called into activity by this environmental change of the negro could, at the time it was made, have foretold the inevitable results which are now but too evident to every one. It is a repetition, in part at least, of what happened, and happens now, to the aborigines of North America, Australia, and New Zealand, who, in their unequal warfare with modern civilization, have been, and are being fast decimated and exterminated by pulmonary phthisis.

## THE NEW LOCAL ANESTHETIC, HOLOCAIN.

BY HASKET DERBY, M.D., BOSTON.

In an article<sup>1</sup> on "Certain Dangers attending the Use of Atropine," published a few years ago, I endeavored to call attention to the possible danger of increasing intra-ocular pressure connected with the employment of the ordinary mydriatics. The well-known fact that, in glaucoma, dilatation of the pupil increases and contraction of the pupil diminishes intra-ocular pressure long since led to the observation that the instillation of atropine and allied drugs might produce an attack of glaucoma in an eye predisposed to this disease. This observation was also found to hold good in regard to homatropine and even cocaine. But with the latter agent, used as it so generally is for the purpose of producing local anesthesia, the question of possible ill effects assumes peculiar importance. And, in point of fact, its employment for minor operations on the eye, in the case of patients who have arrived at or passed the period of middle age has been seriously hampered by the foregoing consideration.

Other disadvantages are, moreover, found to occasionally attend the instillation of cocaine. General faintness, dizziness, and even vomiting have from time to time been known to occur. Symptoms of cardiac disturbance, depending no doubt on some peculiar idiosyncrasy, are met with in some individuals.

Search has therefore been made for a local anesthetic that should be free from the disadvantages of cocaine. But none of the preparations experimented with have thus far proved wholly satisfactory. For one of the more recent of these, eucaine, it has been claimed that no pupillary enlargement, and therefore no increase in intra-ocular pressure, follows its use. But it causes local irritation, and therefore cannot be employed in inflammatory affections. And its repeated application has been found to finally give rise to pupillary dilatation. It offers no advantages over cocaine, and possesses peculiar drawbacks of its own.

In the January number of his *Centralblatt*, Professor Hirschberg announces the receipt of a new local anesthetic, to which he at first gave the name of "amidin." He found its anesthetic effects on the eyeball to be prompt and entire, no local irritation and no pupillary dilatation following its use. He used it with success in the extraction of a traumatic cataract, the presence of which had already given rise to inflammation.

<sup>1</sup> Boston Medical and Surgical Journal, December 28, 1893, p. 640.