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Contributors

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MEDICO-LEGAL RELATIONS OF PELLAGRA.

By J. W. BABCOCK, M. D., Physician and Superintendent, State Hospital for the Insane, Columbia, S. C.

The general parallelism to be found in the history of pellagra in the Old and the New World, although striking, is perhaps after all merely corroborative evidence of the clinical identity of the disease as found in both hemispheres. In no respect is this historical and clinical similarity more marked than in the little studied though highly important medico-legal relations of pellagra.

European.—To Legrand du Saulle,¹ of France, seems to belong the honor of having first directed attention to the importance of this aspect of the malady. He emphasized the fact that from the medico-legal point of view the most salient phenomena of pellagra consist in vertiginous crises, in acts of violence, and in irresistible impulses to homicide and suicide. Following up the study of the jurisprudence of pellagra in 1865, Sorbets² wrote: "This is a question which calls for the investigations of all physicians living in countries where they meet with cases of pellagra." It was doubtless a painful confession for the distinguished Landouzy to make when he said: "I have since been convinced that I once allowed to be executed for homicide a woman, who, without doubt, had committed the deed during an attack of pellagrous insanity." After his life-long experience with the disease, and with the insane, Lombroso left the opinion that "A common symptom of pellagra is the tendency to unpremeditated murder or suicide without the slightest cause. The sight of water suggests drowning in the form of murder or suicide." Or as Marie³ says: "Suicides by drowning are numerous also by reason of a kind of motor automatism or instinctive impulsion similar to attacks in epileptics. They do not know when they throw themselves into the water, and if they survive they cannot explain their attempt." This "hydromania" of Strambio, that is, the impulse of pellagrins to drown themselves, has been discussed by all writers upon the disease since his time (*circa* 1785). Sorbets,² however,

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takes a more comprehensive view of the subject in asserting that "Nothing is more capricious or variable than pellagrous insanity. Almost all pellagrins experience a special *penchant* to drown themselves, although others perish by strangulation, or throw themselves from high places, or, according to Soler, into the fire." And he adds: "But it is not only against themselves that pellagrins direct their insane acts; under the influence of homicidal monomania they have other victims. Thus, then, pellagra is a malady in which, at an undetermined stage, the intellectual faculties are obliterated, abolished or obtunded. The patient does not properly judge his condition, his position, or his relationship to his environment; he commits the most reprehensible acts without motives, and this is the most convincing proof of his insanity. One who commits murder from personal interest, for robbery or from revenge, is not in the same category as one who commits homicide because of an accidental derangement of his mental faculties, and without an interested motive. This is the fundamental principle of all legislation which excuses the acts of the insane. * * * Thus pellagrins, who are attacked by well established pellagrous insanity * * * have obeyed a power, a force which they cannot resist, and, hence, do not come under the penalty of the law. This is the point of view which it is necessary to recognize regarding this grave question, which concerns the dignity of families, and the honor of justice." To this may be added the opinion by du Saulle¹: "Pellagrins, for example, who obey homicidal impulses, which so frequently accompany their insanity, have been condemned as murderers, and this with the consent of medical experts, or at least it is in accordance with the conclusions of their reports, that these unjust sentences have been pronounced."

Antonini,⁴ the Italian alienist and pellagrologist, has written that: "In pellagrous regions there are frequent cases in which it is possible to find in indicted persons some outward expression of pellagra, even when the examination is made some time after the actual deed or during the progress of the trial. * * * To the expert alienist it will not be difficult to establish his case in persons suffering from severe pellagra. Usually these facts will have been recorded by the examining physician who has sent the patient to an insane asylum. But pellagra may be present in an able-bodied farmer who has not felt the need of medical advice."

Legrand du Saulle¹ has suggested as a method of inquiry that "In examining a criminal suspected of pellagra, the expert would naturally inquire whether the act committed presented any relation to the delirious manifestations, hallucinations and impulses which are ordinarily observed in this affection; if he has been able to find it under the direct dependence of maniacal excitement, stuporous depression or dementia, the three common forms of pellagrous insanity; if it were done at the time of vernal exacerbations; if insolation was an etiologic circumstance; if the tongue shows signs of a gastric involvement; if the hands present the pathognomonic erythema; if vertigo preceded for several days; if he shows locomotor vacillation; and if previous suicidal attempts have been made as shown by cicatrices."

Mongeri,⁵ another Italian authority, has summed up his views upon the responsibility of pellagrins in these words: "The legal measures, civil and criminal, which a magistrate ought to apply, and the expert request for the benefit of pellagrins are various: while a pellagrin is in the early erythematous stage, it is not possible to raise in a court of justice the question of his enjoying the full use of his mental faculties; therefore, it would be difficult for one to appeal for an attenuation of punishment for an alleged criminal upon the single fact that he has the pellagrous erythema. When, however, the disease-process has become complete, and mental disturbance is added to the physical phenomena, one would be obliged to appeal for a stay of proceedings in a court of justice, and absolute irresponsibility in an institution because there are moments when the pellagrin so completely loses his power of self-control as no longer to be able to restrain himself from doing a criminal act."

But Legrande du Saulle¹ directed attention to an unusual evolution of pellagrous insanity by asserting that "Although mental alienation is usually a late manifestation in cases of pellagra, it sometimes precedes the development of gastro-intestinal and cutaneous symptoms. Two such cases were noted by Strambio and one by Landouzy."

Civil Capacity.—Sorbets² reached the conclusion that: "Examined from the point of view of the civil consequences, pellagra is a great peril. After what has been said of the nature of the insanity, one may easily divine that the isolation, the melancholy depression, and the ideas of persecution can undermine at any time the free will

of a donor, or the capacity of a testator, or give opportunity for the base intrigues of adventurers."

Diagnosis.—As noted by Lombroso, and quoted by Marie³: "Frequently the pellagrous psychosis appears under the form of a special melancholia, more often in the form of an insanity with systematized delusions. This last form may be observed in hereditary pellagra; vagaries of memory, self-accusations, nosophobia, apprehensions of personal violence, delusions of pregnancy, loss of personality, and concealment of sex, have all been noted.

"A woman of Seronno, 38 years old, confided mysteriously to the judge that she had been violated, and had become pregnant. She believed that she had given birth to a child, and then, with the help of her seducer, had buried it alive; for three months she led the officers of justice to many places in search of the little corpse; when finally a medical examination revealed that she was a virgin suffering from pellagra." Sorbets² affirms: "For alienists, hallucinations are the chief characteristic, the pathogomonic phenomenon of pellagrous insanity."

It was the opinion of Legrand du Saulle¹ that pellagrous insanity cannot be simulated with any degree of success by virtue of the multiplicity of the phenomena which it assumes from time to time. From his researches upon the subject, du Saulle advanced these propositions: 1. In pellagrins, whose intelligence has become affected, the insanity often undergoes transformations, but impulses to homicide and to suicide persist, and aid in clearing up the medico-legal diagnosis. 2. Psychic disturbances precede in some cases the alterations of nutrition and the cutaneous phenomena, and this circumstance, especially, if pellagra is sporadic, exposes the medico-legal expert to grave errors, which examination extended over a considerable time can alone enable him to avoid. 3. Pellagrous insanity well verified establishes in criminal procedure irresponsibility for the acts committed, and in civil cases the just suspicion of agreements, contracts, benefactions and wills.

Among the crimes recorded in Europe, as committed by pellagrins, are suicide, homicide, infanticide (Alpago-Nevello⁸), cleptomania (Tamburini⁹) and false accusation. Reference has just been made to some of the civil cases that may arise in connection with the disease.

To sum up we may quote Sorbets:² "Well established pellagrous insanity implies in criminal law irresponsibility for the acts committed, and in civil law raises the just suspicion of sales, contracts, donations and wills."

Egyptian.—Dr. John Warnock,⁶ Director of the Government Hospital for the Insane near Cairo, reported in 1903: Fifty-two patients suffering from pellagrous insanity were admitted, of whom seven were criminal lunatics. Delusions of persecution, of being put under a spell, or of being poisoned, etc., are frequent mental symptoms of this malady, and it is therefore not surprising to find that five murders were committed by these patients before being sent to the asylum as criminal lunatics. In 1902, also, two murders committed by men suffering from pellagra occurred to my knowledge. These patients are very prone to suicide and to injure their children. It is to be regretted that so many of them have to be sent back to their homes before recovery, especially as prolonged treatment would appear to cure a certain proportion of cases."

Sandwith,⁷ from his experience with pellagra in Egypt, has noted "That many criminal lunatics, brought to the Cairo Asylum, are found to be pellagrous; they have been arrested for some purposeless murder in consequence of delusions which they forget and deny a few days after admission. One such case was said by his family to be quiet generally, but to have violent outbreaks every winter. He remained melancholic but quiet at the asylum for eleven months, and then suddenly (in January, 1904) attacked another patient without warning, and would have killed him if the attendants had not interfered; his excuse was that the man was beginning to persecute him."

American.—So far as I have been able to learn, the medico-legal side of pellagra has hitherto not been discussed separately by American writers, although much activity has been shown regarding most of the other aspects of the disease. To show that the history of pellagra, in this respect also, has been repeated in our country, I beg leave to submit a number of brief outlines of cases compiled from newspaper reports from many parts of the United States, as well as from medical journals and selected from personal experience:

At the July, 1913, term of court in Chester, S. C., the jury brought in the verdict of "Not guilty of murder on account of insanity" in the case of *The State v. Richard R. Reighley*, who had killed Free-

man A. Wright several months previously. The attorneys for the defense showed that the accused was suffering from insanity attributed to pellagra. The solicitor (prosecuting attorney) accepted the evidence of Dr. H. E. McConnell upon this point. The manuscript of this paper was also used and quoted by the attorneys at the trial. Reighley was acquitted as stated above. He was subsequently committed to the State Hospital for the Insane by the presiding judge and found to be a confirmed pellagrin.

I have notes of another case of homicide by a white woman, who, in November, 1909, it was alleged, shot the postmaster of a middle western town without warning, while suffering from melancholia "brought on by rheumatism and pellagra." The records of the court, however, do not establish the presence of pellagra in the case, nor was it referred to by the defense. The patient was placed in an asylum.

Near Grayson, La., September 9, 1913, Mrs. R. S., in the last stages of pellagra, was reported to have become insane and to have made several ineffectual attempts upon the lives of her children, as well as upon her own life. Although regarded as a constant menace to her family, in view of the fact that she appeared to have only a short time to live, her friends decided to watch her and not commit her to an asylum.

Suicides by pellagrins have frequently been reported by the newspapers. These reports usually employ such adjectives as "dread," "incurable," *et cetera*, and no doubt, as has been claimed, contribute to the development of the pellagraphobia, which is widespread in some parts of the country. While I confess that the presentation of the notes on these cases forms a chapter of horrors, yet taken together they make a part of the early history of pellagra in the United States and, therefore, are worthy of record. They also serve to emphasize the peculiar relationship which the malady sometimes bears to the body politic.

Mr. T. E., of Lancaster, S. C., 53 years old, a pellagrous mill operative, committed suicide in August, 1911, by drowning in a pond near the mills. His rescue was attempted, but E. refused help, and saying, "I am going to drown," threw himself again into deep water and disappeared. E. was in the last stage of pellagra, and, upon the recovery of his body, it was found that his clothing was weighted with stone, thus indicating premeditation. Despondent because of

continued suffering with pellagra, Mrs. M. C., of Spartanburg, S. C., committed suicide by drowning in a pond August, 1912. I know of three other suicides of pellagrins by drowning in ponds in South Carolina. At Columbia, S. C., April 26, 1914, Mrs. J. L. T., a pellagrin, was found dead in a bath-tub in her home at 6 a. m. The cause of her death was given by the coroner as drowning and the contributory cause as pellagra. Miss K. T., of Cross Keys, Ga., ended her life June 5, 1913, by jumping into a well. "She was a victim of the dreaded pellagra." She left a note saying: "I have decided to end my suffering by seeking death. You will find my body in the well next door." The "hydromania" of Strambio would thus appear to prevail in this country as it does in Italy. In the "pellagra belt,"—if there be any limitation to the widespread prevalence of the disease—it would, therefore, be well to consider this malady as a possible cause in cases of "inexplicable" drowning. In insane asylums both white and colored pellagrins, especially the women, are prone to attempt suicide by drowning in bath-tubs.

I have notes of a female pellagrin, Mrs. X., a surgical patient in a general hospital at the same time with her baby who had "marasmus." Being on a different ward from her child, she worried a great deal over the separation, became noisy day and night and finally developed the homesickness so characteristic of pellagra. She was frequently detected by the nurses filling the ward bath-tub and turning on the gas. Because of these tendencies she required constant watching, but she was finally taken home before the occurrence of a serious accident. Her subsequent history is not known to me.

Other methods of suicide by pellagrins have also been reported. Among these may be mentioned: That of Mr. M. K., of Society Hill, S. C., in October, 1910, by hanging; of Mrs. C., of Tennessee, July, 1911, by carbolic acid; of Mrs. B., of Wiggins, Miss., who, having had pellagra 18 months, became suddenly insane in September, 1910, and tried to commit suicide; of Mrs. J. H. M., of Gainesville, Ga., who, in October, 1910, becoming despondent because she believed she would never recover from pellagra, committed suicide; of Mrs. E. H., of Greenwood, S. C., a pellagrin, who, in October, 1910, attempted suicide by slashing her throat with a pocketknife. In August, 1911, Mr. T. B. B., 53 years old, a respected citizen of Birmingham, Ala., and a pellagrin, cut his throat with a razor. Desperate and insane as a result of pellagra, W. A. G., of Durham,

N. C., October, 1911, shot himself in the head with fatal result. At Milledgeville, Ga., in March, 1912, A. W., aged 72 years, an insane pellagra patient under private care, threw himself under a freight train and was instantly killed. The attendant in charge of him attempted to pull him from the track, but W. held on tightly to the rail and was beheaded.

In November, 1912, Mrs. J. P., of Columbus, Ga., aged 30 years, having been mentally deranged from pellagra for some time, committed suicide by stabbing herself in the left breast with a pocket-knife. She had previously made two or three unsuccessful attempts upon her life, and, although closely watched, she finally succeeded with a knife she had borrowed to peel an orange. At Stantonsburg, N. C., in November, 1912, W. J. E., 35 years old, a well known citizen, having been ill for several years with pellagra, killed himself by drinking wood alcohol. It is supposed he had grown despondent over his condition and committed the act impulsively during the brief absence of his wife. In June, 1913, Mary G., colored, and a pellagrin, whose mind had been slightly impaired for some time, after writing directions concerning her five children, committed suicide by hanging. This is the more noteworthy as suicide among the colored race is comparatively rare. I have records of a negro man "who beat his brains out against the wall of his house," the cause assigned for his act being pellagra. In April, 1913, it was reported from Wichita Falls, Texas, that R. N. M., a retired farmer, 52 years old, and a sufferer from pellagra for some time, was found dead in his barn with two bullet holes in his breast. He left a note addressed to his wife saying he thought he was acting for the best. Mr. W. M. M., a carpenter, aged 52 years, committed suicide by drinking carbolic acid at Spartanburg, S. C., November 14, 1913. He had been ill with pellagra for a year. Despondent over his inability to work at his trade he ended his life in the temporary absence of his daughter, with whom he was living. These citations from newspaper accounts show the frequency of these tragedies arising from pellagra among the general population. Aside from their medico-legal value, may they not serve also to put physicians on their guard for symptoms of depression when treating pellagrins?

I have also known of an alienated white female pellagrin committing suicide by hanging herself from a window grating by her own hair, and a few strands of twine which she had concealed.¹⁰ A white

female pellagrin in a general hospital, while depressed over her condition, which she regarded as hopeless, drank, with suicidal intent, a quantity of alcohol which she seized from a nurse's basket. Soon after her removal home, she drank a half pint of whiskey, and two ounces of tincture of nux vomica with the same object. Later she ran away from home at night, and was found lying in a shallow pool of water in the road. These acts necessitated her confinement in an institution. Her asylum residence lasted about eight months, and was marked by frequent suicidal attempts. She gradually improved, and, having partially recovered, was finally taken home against advice. It is rumored that she is now well.

The obsession for self-destruction is thus shown to be very common with pellagrins in this country, and while we must recognize their strong inclination to drown themselves (the "hydromania" of Strambio), in view of the many other methods of suicide to which they resort and of their homicidal tendencies it might be well to adopt the single term of thanatophilia as applying to the compulsion for ending life, which so often dominates their will and conduct.

In September, 1912, I saw an interesting case of self-mutilation in a white male pellagrin, who was insane: E. T. B., 35 years old, having had pellagra five years, and having been in an asylum about two months, suddenly bit off the tip of his tongue and the tip of the index finger of the left hand nearly up to the base of the nail, and tore off the nails of the little and ring fingers of the right hand. Usually mute and always reticent, he, after much persuasion, explained the reason for his act, by saying, "I did it because I could not help it."

Another case illustrating compulsions is that of Mrs. A. B. B., 42 years of age, admitted to our State Hospital September 5, 1913. She had been in failing health since the previous January. Although pellagra was not suspected, for several months her conduct had been such that she had to be watched. She once aroused her husband at night, saying: "Wake up and let me tell you what I was trying to do; when I came to myself I was trying to get the oil-can to burn the house." In August she attempted to throw herself from a window of a tall building, and on being rescued said: "Just let me alone, I am crazy." On being taken home she deplored her actions, and did not appear confused. Upon admission to the hospital, examination disclosed rough skin on the backs of her hands

and fingers. The mucosa of her mouth was fiery red, the tongue denuded, and there was decided salivation. She acknowledged that she had pulled out her eyebrows and complained of constipation and loss of appetite. Under treatment she improved rapidly, having gained 43 pounds when she was taken home, October 11, 1913, about five weeks after admission.

Dr. Eleanora B. Saunders, while woman physician at the South Carolina State Hospital, reported¹⁰ a case of medico-legal interest, which, in brief, is that of Mrs. P., 33 years old, with mental aberration appearing late after an attack of pellagra in 1910. Among other symptoms the patient imagined herself pregnant and had a uterine "crisis," lasting three hours, the pains, to an observer, being typical of labor. For some weeks afterwards she insisted that she had been delivered of a child, and expressed great anxiety for its safety, accusing the physicians of cruelty in removing and concealing it from her. These delusions of pregnancy are not unusual among insane pellagrins, suffering from uterine and perineal lacerations. This fact is brought out here to show, in connection with Lombroso's case cited above of the woman of Seronno, that pellagrins with such delusions are especially prone to make false accusations, both against themselves and others. Obviously the modern conception of pathological liars—*pseudologia phantastica*—is suggested and should also be considered here.

Dr. D. M. Crosson, of Leesville, S. C., has given me this personal communication of the history of a pellagrin who has been under his observation for some time. Mrs. M. R. P., 45 years of age, the mother of six children, the youngest being now ten years old, has had pellagra for four years. Latterly she has developed the delusion that she is about to be confined. Influenced by this idea, within the past year she has summoned her physician six or seven times. She appears to be having labor-pains and asks to be delivered. Examination discloses absence of pregnancy. She has hemorrhoids but no pelvic lacerations. No other delusions were discovered.

At Nashville, Tenn., in November, 1911, J. F. W. and wife filed a bill in the chancery court against H. H. R., praying that an exchange of land for notes be declared void and that the transfer be set aside because the plaintiff was a sufferer from pellagra at the time of the transaction, and was not of sufficient soundness, mentally, to protect himself in the trade. Under date of September 18, 1912, I was

informed by Robert Vaughn, Esq., clerk and master of the chancery court at Nashville, that "From an inspection of the depositions in the case of W. v. R. I see that two physicians were introduced, who stated in a general way that patients suffering with pellagra in addition to marks upon the hands and other portions of the body, which are characteristic of the disease, also had bowel trouble and frequently the mind became involved or impaired. The cause has not been tried yet by the court, hence there has been no decision as to what extent, if at all, the complainant, W's., mind was affected by pellagra." On March 31, 1913, this case was still on the docket, having never been heard or disposed of.

Instances are known of asylums in which the diagnosis of pellagra having been overlooked, nurses have been unjustly discharged for alleged neglect in bathing patients, the pellagrous erythema being mistaken for burns and scalds. In doubtful cases of this nature pellagra should be considered as a possibility.

Dr. J. J. Watson, of Columbia, S. C., thinks a large proportion, probably 90%, of the pellagrins he has had under care in a general hospital prevaricate or fabricate. Especially is this noticeable in their complaints against nurses for alleged omissions of the treatment ordered or for improperly carrying out the physician's directions. Investigation has proven all such charges and suspicions to be without foundation. Sometimes this mental attitude of pellagrins suggests the fabrication of Korsakoff's Syndrome. The hysterical character is also suggested. It seems to arise either from amnesia or else from hallucinations. It obviously is not due to a desire to make mischief.

The liability of pellagrins seemingly convalescent to sudden death, deserves to be brought to the attention of medical examiners and coroners. A similar tendency has been noted in beri-beri. In pellagra these attacks may simulate angina pectoris.

Naturally, the question arises: To what extent are these criminal, abnormal or unusual tendencies due to pellagra *per se*, and to what extent do they belong to insanity in general? I shall not undertake to answer this question narrowly. In many of the cases cited the two conditions of pellagra and insanity have been coexistent, and in most of them the insanity appears to have followed the pellagra. The inter-relationship of the two conditions is a separate question, and properly does not belong here. My own opinion is that the

several acts described in this paper have arisen from a mental condition due to the pellagrous intoxication, which has either greatly modified or nullified individual responsibility.

The cases cited here have occurred in eight States—North Carolina, South Carolina, Georgia, Tennessee, Alabama, Mississippi, Louisiana, and Texas—and they necessarily must constitute but a small proportion of those actually occurring in this territory and in this country in the last three or four years, and associated with pellagra, since they have been compiled by a single student of the subject. But collectively they demonstrate the variety of abnormal actions which have been attributable to the unknown poison of pellagra. Furthermore, these actions duplicate, in a general way, those reported by foreign observers.

It thus appears that evidence is slowly accumulating which goes to prove that the history of pellagra is being repeated in the United States and that among other burning questions which its discovery has aroused that of the medical jurisprudence of the disease is one with which the general practitioner, the neurologist, the alienist and the jurist will have to reckon. Certainly, as Sorbets² said: "This is a question which calls for the investigations of all physicians living in countries where they meet with cases of pellagra."

In conclusion, I quote again from Sorbets²: "From the medico-legal point of view, pellagra, as one sees it, raises a grave question which touches the highest interests of society, of ethics and of justice—interests which are most dear to man: the life of citizens and the honor of families. This question, first introduced by Legrand du Saulle, has not received the attention it deserves, but it is really a subject of great importance." It is to impress the "great importance" of this phase of pellagra upon American students of the disease at this comparatively early stage of our researches upon the malady that this paper has been prepared.

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