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NEGRO LETHARGY

Symptoms & Morbid Anatomy.

Hirsch, August.

Handbook of Geographical & historical Pathology

Vol. 3., 1886

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CHAPTER XIX.

NEGRO LETHARGY.

(SLEEPING SICKNESS, MALADIE DU SOMMEIL, HYPNOSIE, SOMNOLENZA,
LALAREGOLO, NELAVANE.)

§ 187. SYMPTOMS AND MORBID ANATOMY.

About the beginning of this century attention was called
by Winterbottom, a surgeon in the British service, to a
disease of the natives along the Bight of Benin, which
consisted in a peculiar state of lethargy and was always
fatal sooner or later. Our more precise information about
the malady dates from 1840, when Clarke published the
observations that he had made of it in Sierra Leone. The
lethargy subsequently became the subject of a large number
of inquiries by English and French practitioners;¹ and
although they have not gone very deeply into the causes

¹ Abbott, 'Arch. de méd. nav.', 1883, Dec., 456; Bailly, 'L'Ogouné, Afrique
équatoriale occidentale,' Par., 1880, 45; Baetion, 'Arch. de méd. nav.', 1881,
Nov., 409; Carbonel, 'De la mortalité actuelle au Sénégal, &c.,' Par., 1873;
Chassaniol, 'Arch. de méd. nav.', 1865, Mai, 509; Clarke, 'Lond. Med. Gaz.,'
1840, Sept., 970; also in 'Edin. Monthly Journ. of Med.', 1842, April, 320, and
'Transact. of the Epidemiol. Soc.', 1; 116; Corre, 'Gaz. med. de Paris,' 1876,
Nr. 46, 47, and 'Arch. de méd. nav.', 1877, Avril, 295, Mai, 330; Dangaix,
'Moniteur des hôpit.', 1861, Nr. 100; Dumontier, 'Gaz. des hôpit.', 1869,
Nr. 120; Gaigneron (according to the references of Dutroulau, 'Traité des mala-
dies des Européens dans les pays chauds,' Par., 1861, 101, and Boudin, 'Annal.
d'hyg.', 1862, Jan., 75); Gore, 'Brit. Med. Journ.', 1875, Jan., 5; Griffon du
Bella, 'Arch. de méd. nav.', 1869, Jan., 73; Guérin, 'De la maladie du som-
meil,' Par., 1869; Iglesias y Pardo, 'Observ. teorico-prat. sobre las fiebres
Africanas de Fernando Pó,' Ferol, 1877; Nicolas, 'Gaz. hebdom. de méd.', 1861,
Oct., 670; Ogle, 'Med. Times and Gaz.', 1873, July, 6 (information supplied by
McCarthy); Ribeiro, as quoted by Ullersperger, 'Monatsh. für med. Statist.,
1871, Nr. 12; Ritchie, 'Edinb. Monthly Journ. of Med. Sc.', 1852, May, 414;
Santelli, 'Arch. de méd. nav.', 1863, Avril, 311; Winterbottom in Simmons,
'Med. Facts and Observ.', 1800, viii, 56.



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and nature of this highly peculiar malady, their researches serve to show that its area of distribution includes the greater part of the West Coast of Africa, and that it is strictly confined to the negro race.

Clinical characters.—The onset of the distinctive morbid phenomenon, a state of lethargy or reverie, is often preceded for a considerable time by a series of prodromal symptoms which are so characteristic that those in the individual's company are never deceived as to the fate in store for him. He complains of weakness, especially after considerable exertion, of low spirits, disinclination to work, pain or a feeling of weight in the head, and giddiness. He has a desire to give himself up to repose at other than the usual hours, seeking out some solitary and quiet spot wherein to pass the time half asleep. Although he may strive against that disposition with all his might he cannot altogether conquer it, and it is only amidst the liveliest kinds of excitement that he is able to remain brisk. His gait at the commencement of the malady is still firm, although he is easily tired; but as the disease proceeds and the lethargy becomes overpowering, he goes about with his eyes half shut and his walk becomes unsteady like that of a person in drink. There are no disorders noticeable in the other functions so considerable as to suggest a profound and mortal disease; unless it be a lowering of the body temperature, which makes the patient feel the need of warmth and causes him to sit in the sun, together with a certain degree of slowness and sometimes irregularity of the pulse. In severe cases there is an evening rise of the temperature to 38.5°C ., or even above 39°C . (100° to 102°F .), with a quick pulse (Corre). The patient's sensory perceptions as well as his intellectual faculties are quite unimpaired; if he is not talkative, he answers promptly and intelligently when spoken to. As the disease progresses his expression betokens dulness of thought; his gait becomes slow, uncertain and tottering, although, when he is thoroughly interested, he can still execute any sort of movement. Meanwhile the somnolence has increased so much that he can hardly control it; it becomes difficult to rouse him, and not unfrequently he falls into a lethargy in the midst of the loudest noises or over his food. "J'ai vu le malade, que je pressais de boire," says Nicolas, "essayer de porter le verre à sa bouche, et s'assoupir avant d'avoir achevé ce mouvement si simple"; and Gore quotes the following remark by Ferguson: "I have seen the subject of a case lying fast asleep with a mouthful of half-chewed victuals in his cheek; he had, in fact, fallen fast asleep while eating his dinner." Concerning the nature of this somnolence, Corre has the following: "La somnolence, exceptionnellement poussée jusqu'au coma, rarement continue, n'est pas rigoureusement constante. Tous les malades atteints de néglavane ne dorment pas; beaucoup demeurent couchés, les paupières fermées, demi-occluses, ou complètement ouvertes, mais sans autre séparation d'avec le monde extérieur qu'un profond indifférentisme. Il est à remarquer que la

plupart des malades véritablement somnolents nient le sommeil quand on les interroge: on ne les a pas plutôt quittés qu'on les aperçoit étendus dans un coin de cour ou de case."

Apart from a more or less considerable loss of the sense of touch, which serves to explain also the uncertainty in the movements, especially those of the upper extremity, there is no sensory disorder noticeable. Sometimes the memory is slightly impaired, but in other respects the faculties of the mind are intact. In many cases convulsive movements occur, without loss of consciousness, or it may be merely slight choreic movements; these are followed by temporary contractures or paralysis of certain parts, and in most cases by an increase of the lethargy. When the latter is very profound there may be involuntary evacuation of the feces and urine. Even when the disease has made great progress there is nothing abnormal to be noticed in the vegetative functions of appetite, digestion and nutrition. The stools are mostly without colour, as they are apt to be in negroes even in a state of health; the urine contains no precipitate, is of clear colour, and free from albumen. It is not until the disease has reached its acme that the patient begins to waste; at the same time the pulse becomes slow and small, the skin assumes a dried-up, earthy, or ash-coloured appearance, sometimes there is slight œdema round the ankles (but never dropsy fully developed), the drowsiness becomes continuous, increasing gradually to a profound coma, and life goes out for the most part very quietly but sometimes in a paroxysm of convulsions. Intercurrent disease, such as dysentery or pneumonia, may hasten the fatal issue, which would seem to be in any case almost inevitable. Of 179 negroes suffering from lethargy, who were under treatment by English practitioners on the Sierra Leone coast during eleven years (1846-50 and 1859-66), the disease had proceeded to a fatal issue in 132. The duration of it (not counting the prodromal stage, which is often very protracted) is from three to twelve months or even longer.

Morbid anatomy.—The inspections of the dead bodies made hitherto, and not very carefully made, have failed to reveal anything definite about the anatomical nature of the disease. Guérin made twenty-three post-mortem examinations, and in nearly every case found the cerebral sinuses and the meningeal vessels full of blood and dilated; in three cases slight increase of the cerebro-spinal fluid, which was clear; the ventricles always normal, and occasionally a small amount of serum in them; in one instance slight serous infiltration of the subarachnoid space at the base of the brain; never any trace of acute or chronic inflammation of the membranes; the brain-substance always of normal consistence, with no trace of softening or other morbid change, *puncta cruenta* seldom numerous in the cut surface of the cerebrum; in one case (where death followed an apoplectic stroke) the membranes much injected and a small spot of apoplexy, all other organs perfectly normal; in one case dropsical effusion into the serous spaces and subserous tissue.

Corre describes a dissection in which there was likewise much hyper-

æmia of the sinuses and vessels, vascularity of the brain-substance (particularly the cortex), its consistence normal apart from extreme hyperæmia and softening of the corpus striatum and slight softening of the thalami, a small quantity of rather turbid fluid in the ventricles, with here and there an obvious thickening of the ependyma; the thoracic and abdominal organs perfectly normal. Griffon de Bellay also examined one cadaver and found the brain-substance and membranes congested, many *puncta cruenta*, and the pons softened. In a case of Gore's the membranes were congested, the brain healthy but anæmic, about a scruple of serum in the ventricles; the thoracic organs quite healthy; several ecchymoses at the pyloric end of the stomach, the intestine for about three feet deeply congested and contracted, and with a considerable quantity of thick bloody fluid inside; liver, spleen, and kidneys normal. In one of his dissections, Dangaix found the brain-membranes injected, a large quantity of flocculent fluid in the arachnoid space, exudation on the vertex, the cerebral substance very vascular and rather soft. In a second case (very imperfectly examined), the sinuses were distended, there was a small quantity of serum in the ventricles, and the substance of the brain and of the cord as far as the cervical enlargement was of strikingly firm consistence. In a third case, besides hyperæmia of the membranes, the serous exudation into the arachnoid, and thickening of the latter with an exudation on the surface at a few spots, there was red softening approaching to liquefaction in the pons, thalami, and corpus callosum; thoracic and abdominal organs normal, excepting the liver which was somewhat enlarged.

Clarke gives the results of five dissections. There was in all of them extreme hyperæmia of the brain-membranes; in two there was opacity and thickening of them; in one a serous exudation into the arachnoid mesh-work; in one the cerebral substance anæmic, while in two others it was highly congested; in two a slight amount of serum in the ventricles; in one the ventricular serum tinged with blood; in one the corpora striata and thalami softened; in most of them the membranes of the cord congested; in two a large amount of blood extravasated in the cervical and dorsal regions of the spinal canal, and exudation besides in one of them; in three (boys from ten to fourteen years old) much fat on the surface of the heart, in one of them with excentric hypertrophy; in one case the latter condition without fat on the surface; nearly always certain appearances of pleurisy, and in two cases indications of pneumonia; in the majority, congestion of the gastric mucous membrane, of the peritoneum, and of the cortex of the kidneys.

Lastly, a fact adduced by Corre and Gore should be noted, namely, that in persons attacked by lethargy, and even before the disease was developed, enlargement of the lymph glands was relatively common, if not altogether constant, although its extent was very slight. Corre lays particular stress on this in his view of the pathogenesis, as we shall see.

§ 188. AREA OF DISTRIBUTION.

The *distribution-area* of negro lethargy includes a large part of the West Coast of Africa between the Senegal and the region of the Congo; there is no mention of it in the writings relating to Angola and Benguela, situated to the south of the Congo, and it probably does not occur in these territories. On the coast of *Senegambia*¹ the principal seats of it are the districts of Baol and Sin, especially the settlements of Portudal and Joal (Corre); it has been seen also on an island in the estuary of the Rio Grande, belonging to the Portuguese settlements (Gore). Of its occurrence in *Sierra Leone*,² we have accounts by Clarke and Gore. The former says that it is more common among the tribes belonging to the interior than in natives of the coast; he speaks of it also among the free negroes of Cape Mesurado in *Liberia*. We hear of cases among the Kroomen on the *Spice Coast* and *Ivory Coast* (Santelli), among the natives of the *Gold Coast* (Clarke), on *Fernando Po* and other islands in the Bight of Biafra (Ritchie, Iglesias y Pardo), in the region of the *Gaboon*, not merely on the coast (Dumontier), but also in the interior chiefly along the course of the Ogooué (Ballay), and finally on the *Congo Coast* (Dumontier, Griffon de Bellay). Wherever the disease has occurred beyond those regions, it has been only in negroes imported from the West Coast, as in the *French Antilles* (Guadeloupe and Martinique). Among 1200 negroes who came under his observation during nine months, Nicolas saw five cases; he thinks that one in every hundred deaths among negroes on the voyage from the Congo to the West Indies is from lethargy, and that if the disease be commoner among negroes in their homes than under these circumstances, the reason would be that those of them who show the first or prodromal signs of the disease are left behind. During twelve years' practice in Martinique Guérin saw 148 cases among imported negroes. Under similar circumstances the malady has been

¹ See the papers by Chassaniol, Gore, Corre, Bestion, Carbonel and Abblart.

² The frequency of the disease in Sierra Leone is shown by the fact that 179 cases came under treatment by English practitioners in eleven years.

seen among negro soldiers in the *Bahamas* (Gore), and among negro labourers in *Brazil* (Ribeiro).

§ 189. PURELY A DISEASE OF NEGROES, MOSTLY IN THEIR NATIVE COUNTRY.

The disease has been found only in *negroes of pure blood*, with two exceptions, one a case of a mulatto reported by Chassaniol, and the other of a Creole negro boy reported by Clarke. It has never been seen in other coloured races or in Europeans. As regards its occurrence in negroes away from their native country, Nicolas says that it does not originate in the blacks born in Martinique, but that a few cases of it have developed in negroes imported into the island, and undoubtedly after their arrival there. Guérin gives more definite expression to this fact, when he says that among the negroes imported into the West Indies from the Congo there have certainly been a few cases of lethargy, that some of these have occurred even a considerable time after arrival, but that there has been none of it in those who have lived in Martinique ten or twenty years, nor among Creole negroes. We learn also from Nicolas that in every ten cases known to him nine were in men and one in a woman. But Corre and Guérin, who could draw upon much larger experience, are agreed that the number of cases is much the same in either sex. It spares no *time of life*, as Corre has found, but it oftenest attacks negroes from twelve to eighteen years of age, and rarely anyone younger.

§ 190. SUMMARY OF THE ETIOLOGY.

It is obvious that the origin of the malady has nothing to do with influences of climate and soil. There is some foundation for the surmise that its cause will be found to lie in certain agencies bound up with the *manner of life* of the natives in those regions; but no one has succeeded hitherto in reaching anything definite concerning them; and all the hypotheses that have been tried have proved to be untenable.

The opinion often expressed that negro lethargy is a toxic process, has to be set aside on several grounds. The smoking of "*dianba*" (Indian hemp) has been blamed for it (Clarke); but that practice obtains all over the East without giving rise to the disease anywhere. Another suspected habit is the inordinate addiction to palm wine, a practice that is indigenous to many other tropical countries where the malady is unknown; moreover, as Corre tells us, the orthodox Marabouts, who drink nothing but water, are as much subject to lethargy as the veriest toppers. It is equally impossible to find a basis for the widely received doctrine that the disease is due to criminal poisoning. That view found a supporter recently in Corre,¹ in the first of his papers on the subject, although he would appear to have abandoned it subsequently; among other reasons against it, is the occurrence of the malady among negroes away from Africa, as in the West Indies.

Another very widely entertained theory of the origin of the disease is that it is a consequence of *depressing emotions*, particularly those associated with the slave trade (nostalgia, sorrow from the breaking up of families, or the feelings arising out of bad treatment at the hands of slave-dealers and slave-owners). But for recent times that cause can hardly come into the question to any considerable extent; and the hypothesis would leave it quite inexplicable why the disease should have been so rare in former times, if it occurred at all, whilst slavery was at its height in the New World, and all those affections of the mind most keenly felt. The chief objection to the hypotheiss, however, is that the disease occurs also in Liberia, among negroes living in freedom in their native seats and amidst orderly, if not particularly good conditions; and that in Martinique, as Guérin informs us, it is oftenest seen in those employed as domestic servants in the towns, and leading a comfortable and perfectly contented life.

The last theory that we have to mention arises out of the

In his paper in the '*Gaz. méd. de Paris*' (l. c.), he throws out the conjecture that it may be a matter of poisoning by certain moulds growing on maize, rice or other vegetable products, the use of which as food would set up a disease like ergotism. In his second article ('*Arch. de méd. nav.*' l. c.), nothing further is said of this hypothesis.

fact referred to above, that in many of those attacked by lethargy, there have been observed *glandular swellings in the neck*, which may precede the disease. According to a very general belief among the natives, these are the cause of it; and accordingly, whenever they show themselves in a child, they are cut out by the medicine-man. McCarthy¹ and Gore, who were the first to call attention to these glandular swellings, have suggested that an enlargement of the deep cervical glands would cause pressure upon the vessels going to the brain, and thus have the effect of diminishing the supply of blood to that organ; on that hypothesis they would explain the whole series of phenomena. This explanation is altogether untenable and hardly requires to be seriously met. Equally fanciful is the hypothesis worked out from the same fact by Corre, who himself admits that glandular enlargements are by no means constant in negroes suffering from lethargy, and that they are often exceedingly slight (which shows that there can be no thought of their pressing on the blood-vessels). He dwells upon the exceedingly common occurrence of scrofula among the natives of those parts of the West Coast, therein finding the explanation of the frequency of glandular swellings in the neck; and his hypothesis is that the lethargy is due to a scrofulous affection of the brain, or to cerebral tubercle so-called, the morbid phenomena (tremors, ataxia, &c.) of lethargy resembling, in his opinion, the symptoms of cerebral sclerosis: "La maladie du sommeil," he says, "est une maladie de misère, une proche voisine de la scrofule, sinon sa parente, ce qui reste à établir par les autopsies rigoureuses et de nouvelles observations." But it seems to me that we can hardly with a good conscience subscribe to more than the last clause of that sentence.

¹ Quoted in the paper by Ogle.

CHAPTER XX.

TETANUS.

§ 191. A DISEASE OF ALL TIMES AND COUNTRIES.

That the medical practitioners of antiquity had an accurate knowledge of tetanus appears from the medical writings of the period, such as the Hippocratic Collection,¹ and the works of Aretaeus² (who gives an excellent description of the disease), of Galen³, of Soranus (or Caelius Aurelianus),⁴ and of Paulus.⁵ There is the same evidence in the compendiums of the Arabian and other mediæval practitioners. We are therefore warranted in assuming that the malady had been known in the practice of early ages very much as it is known now, and that it has been at all times general. The absence of statistics such as we can use, and that too not merely for past centuries but just as palpably for the present time, makes nugatory every attempt to estimate in figures the amount of tetanus at various periods of history and in various parts of the world. What we know of the genesis of the disease renders it probable that there had been hardly any real differences in its frequency between one century and another.

On the other hand, the geographical information about tetanus, both from former centuries and the present, leaves no doubt that there are very considerable differences between the several countries of the globe in respect to the frequency

¹ 'De diæta in acutis,' App. § 14 ed., Littré, ii, 468; 'De fracturis,' § 31 e. c. iii, 530; Aphor. v, § 17, 20 e. c. iv, 538; 'Epidem.,' v, § 15 e. c. v, 214; 'De morbis,' iii, § 12 e. c. vii, 132; 'De affect. intern.,' § 52-54 e. c. vii, 298.

² 'Morb. acut.,' i, cap. vi.

³ 'Lib. de tremore, palpitacione, convulsione et rigore,' ed. Kühn, vii, 585.

⁴ 'Acut. morb.,' iii, cap. vi, ed. Almeloveen, 204.

⁵ 'Lib. iii, cap. 20, ed. Basil, 1551, 164.

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