

night.) It will be remembered that no external marks of violence were found.

That the hymen of this unfortunate girl who was in the habit of staying out till two and three in the morning with James Malley, or who may have met any sort of an accident not necessarily implying a loss of virtue, even if she did pass a night at his house, may not have been entirely perfect is quite probable, but in view of the fact that the girl without any other sign of violence left the house of her alleged assailant the very morning after the alleged accomplishment of his hellish designs waving and kissing her hand to him and was able directly afterward to eat a hearty meal of steak and mushrooms, there seems to be a sort of moral presumption that she was not very much maltreated. Surely an opinion that the hymen had been forcibly ruptured during a felonious assault within sixty hours of her death must come from those who have greater experience with recently ruptured hymens than falls to the lot of the average practitioner.

There is little to throw light on the remote cause of death. Whether it was a suicidal leap taken in the dark of Thursday night after a day's reflection on her mother's rebuke and her outlook for the future, or whether wandering out upon the pier in the evening a misstep plunged her down where, stunned, a brief and trifling struggle ended her existence, is something which may never be known till after the bugle call of the angel of the Apocalypse, but this case seems to me to illustrate the danger and folly of looking too strongly at individual points, giving undue weight to the presence or absence of by no means constant appearances, instead of viewing the picture as a whole and arriving at a conclusion based upon the more reasonable probabilities.

The lives of two young men and of a young woman of more or less value to the community, certainly with possibilities of good in them, were jeopardized, State and individuals put to very great expense, and the public mind inflamed all because there was not sufficient care taken in deciding the primary question whether a crime had really been committed or not.

ON THE EXISTENCE OF SYPHILIS IN AMERICA BEFORE THE DISCOVERY BY COLUMBUS.¹

BY WILLIAM F. WHITNEY, M. D.

MUCH has been written to show that syphilis existed upon this continent previous to the coming of the Europeans. The early historians affirm that the aborigines suffered greatly from this malady, while the Indian traditions speak of it as the "white man's disease." This conflict of historical evidence can only be decided by the record which has been left upon the bones of the people themselves. But when employing this record there are two fundamental questions which must be answered in every case. First, are the bones those of Indians who died before the white man first visited these shores? and secondly, if there are lesions present, are they such as could only be caused by syphilis and nothing else?

The first belongs rather to the province of the archaeologist, but his evidence must be such as can be readily accepted, and the authenticity of the specimen proved

¹ A portion of a paper read before the Boston Society for Medical Improvement, March 26, 1883.

beyond doubt. It is for the pathologist then to determine the nature of the lesion. But a certain amount of special training must also be had in the appearances produced by the action of the soil and the roots of plants, which simulate quite closely the changes resulting from some of the pathological processes, especially those of a destructive character. And these latter, when present, are moreover very quickly effaced by the action above mentioned. Such being the case, any proof which rests upon ulcerative effects of syphilis must be received with the greatest caution, and as far as is known none has been presented as yet.

A new production of bony tissue could never have been produced after death, and it is to such lesions that attention has been chiefly directed. But every deposit of bone is not the result of syphilis, and especially is this true of the more or less nodular enlargements of the tibia, which have been brought forward as positive proof. This bone, from its position and subcutaneous situation, is more exposed to insult than any other in the body. And this must have notably been the case among the savage tribes inhabiting the forests and mountains, and the accidental blows which were received from logs or rocks are a sufficient cause to excite an ossifying periostitis or osteitis.

The Peabody Museum of Archaeology at Cambridge contains many striking illustrations of enlargements along the face or crest of the tibia of Indians of unquestioned antiquity. But taken by themselves they do not require any specific exciting cause beyond an ordinary injury. And those which are in the Army Medical Museum at Washington are capable of being explained in the same way.

In order to prove that these lesions are due to syphilis a skeleton must be found that presents such processes not upon a single bone, but upon the bones of the upper as well as the lower part of the body. Such examples are always to be seen in all large modern anatomical collections. There is a very fine example in the Museum at Washington in the skeleton of a woman (No. 6414) who had been a camp follower, the bones of which, near the articular ends, are affected in an unmistakable manner. Should such a skeleton as this be found in a mound of undoubted antiquity, there would be no question of the existence of the disease in ancient times.

But whole skeletons are found very infrequently in the old burial places, the long bones decaying, as a rule, much earlier than the skull. It is remarkable, therefore, that more attention has not been paid to searching for marks of syphilis on the cranial bones, since there is one form which is quite characteristic. This has received the name of caries sicca, and was first fully described by Virchow.² As is indicated by the name, it is a form of destruction of the bone without suppuration, and what is of greater value in the present case is the fact that such centres are usually accompanied by an induration about them. The cicatrices resulting from this are often very superficial, have a tendency to assume an irregular shape, and are surrounded by a slightly thickened zone of dense bone. The edges are very sloping, and the whole surface looks as if a thin glaze of bone had been spread over it. When the process is extensive, the diploë is replaced by compact bony tissue. A thin layer of new bone may be present upon the surface of the internal table. A marked example of this manifestation is

² Virchow's Archiv, vol. xv., p. 243.

seen in a calvaria in the Warren Anatomical Museum of the Harvard Medical School (No. 4962).

In the collections of Indian remains in the Peabody Museum, the Army Medical Museum, in the Museum of the Royal College of Surgeons, in London, and of the Société d'Anthropologie in Paris, there have been found but two skulls which presented appearances in any way similar to this.

One was in the Army Museum, No. 733 of the anatomical collection, and was found in a mound in Kentucky by Mr. S. S. Lyon. There are cicatrices over the greater part of the parietal, frontal, and occipital bones. These are relatively large and deep, with comparatively abrupt edges, while there seems to be little tendency to sclerosis about the depressed portions. It seems to be more easily explained by syphilis than in any other way, but at the same time it does not present the undoubted characteristics which are required.

The other is in the Peabody Museum, No. 18264, and shows similar appearances, although not so extensive, and confined chiefly to the frontal region and parietal protuberances. Two or three deeply eroded spots are similar to those which have been observed in a case of cancer, but may have been simply the results of post mortem decay.

The evidence presented thus far does not as yet clearly prove the existence of syphilis in this country previous to the landing of the Spaniards. The conclusive proof is still to be furnished by an extensively and symmetrically diseased skeleton, or by a skull presenting a typical case of caries sicca.

EXPLANATORY REMARKS UPON NEURO-DYNAMIC MEDICINE, WITH CASES.¹

BY B. O. KINNEAR, M. D.

In speaking this evening upon Neuro-Dynamic Medicine, I propose to open my paper by three quotations from Dr. Brown-Séquard's and one from Dr. John Chapman's writings.

Firstly. Dr. Brown-Séquard states: "I consider that the knowledge of the effects of the paralysis and the irritation of the sympathetic nerve opens a new and most important field in physiology, in pathology, and in therapeutics."² Again, from his *Researches in Epilepsy*, referring to the paleness of the face in that disease, he says: "We consider it a most interesting symptom, as it leads to a very probable explanation of the loss of consciousness in epilepsy. After Prof. Claude Bernard had discovered that the section of the 'cervical sympathetic nerve' is followed by a dilatation of the blood vessels of the face, I found that when this nerve is irritated by galvanism there is a contraction of these blood-vessels, and I explained the facts discovered by the eminent French physiologist and myself, by considering the sympathetic as the motor nerve of the blood-vessels of the face. When the excitation takes place in the spinal cord, and the basis of the encephalon which gives rise to the fit, the nerve fibres which go to the head are irritated and produce a contraction of its blood-vessels.

"Of course this contraction expels the blood and the face becomes pale. . . . We think that at nearly the same

time when the origin of the branches of the sympathetic nerve going to the blood-vessels of the face receive an irritation in the beginning of a fit of epilepsy the origin of the branches of the same and other nerves going to the blood-vessels of the brain proper also receive an irritation. A contraction then occurs in these blood-vessels, and particularly in the small arteries. This contraction expelling the blood, the brain loses at once its functions just as it does in complete syncope."

The quotation from Dr. Chapman's writings runs as follows, namely:—

"It has long been known that the sympathetic nerve, called by Bichat the nervous system of organic life, presides over those processes by which the body is developed and sustained. It stimulates and controls the action of the heart, alimentary canal, genito-urinary organs, and all those processes of growth, repair, and removal of effete materials on which the continuous vitality and health of the animal organism depend. During recent years important additions to our knowledge of the functions of the sympathetic nerve have been made chiefly by Prof. Claude Bernard, Dr. Brown-Séquard, and Dr. Augustus Waller, with reference to its power of controlling the action of blood-vessels or what have been termed its vaso-moto functions.

"But as the sympathetic and cerebro-spinal nervous systems are intimately related, and indeed in some parts inextricably and indistinguishably blended both in structure and function, the nervous influence, whether healthy or not, which is exerted over the several organs of the body is twofold; hence, when that influence becomes abnormal, either in kind or degree, the most potent method of restoring it to its healthy condition would be by a dual action at once on the sympathetic and cerebro-spinal nervous systems. The physician who acquires the power of directly controlling these great controllers of the organic functions would immediately obtain the mastery over a large number of diseases." Dr. Chapman claims, and I believe truly, to have discovered this controlling power by the application of heat or cold over the vaso-motor and spinal nervous centres. The above experiments prove what I think is now the widely accepted belief: that the sympathetic ganglia control arteriole expansion and contraction, which, more clearly rendered, is to state that when irritated or hyperactively working these ganglia contract the blood-vessels under their control abnormally, when they act less forcibly than the normal standard requires the vessels acted upon dilate abnormally, either in active or passive congestion.

Dr. Chapman believes that the contraction of arterioles is caused by hyperæmia and expansion, by anæmia of these ganglia; that undue nerve force is created by *increased circulation* in the arterioles of central nervous ganglia, and lessened nerve force by a lack of *normal circulation* in the same. He gives a confirmation of the effect of cutting the cervical sympathetic nerve in Case XLIII., page 411, *Work on Neuralgia*, thus stating that the ice, when first applied over the cilio-spinal, or cervico-dorsal, region, gave rise to a "throbbing headache" and "flushed face." I can further corroborate this result in my own case, having used the ice upon the same region to subdue a constant though not severe posterior nasal catarrh, with which I had been troubled for several years. I always used it one hour to one hour and a half after breakfast. Toward the end of this time I invariably experienced a

¹ Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, February 14, 1883.

² Lectures on the Physiology and Pathology of the Central Nervous System, page 140.