CONTRIBUTIONS

TO
A NEW CHAPTER IN THE PHYSIOLOGY
AND PATHOLOGY OF THE
NERVOUS SYSTEM.

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Professor of the Practice of Medicine and of Clinical Medicine, and Lecturer on
Medical Psychology and Mental Diseases in the University of Edinburgh.V.—ON THE NERVOUS DISORDERS IN GENERAL CAUSED BY EX-
CESSIVE OR UNNATURAL SEXUAL EXCITATION.

THE diseases and disorders of the nervous system which result from unnatural and excessive sexual excitement, whether of mind or of body, or both, are of the most varied character, because there is no portion of the nervous system which may not be thus morbidly influenced. This is a fact of fundamental importance. The ends aimed at in the processes of reproduction are, the maintenance of the species, and, as regards man at least, the perfection of the race, according to the laws of evolution which regulate all the reproductive processes and domestic and social instincts of the highest and lowliest organisms alike. These are most highly evolved in the relations of the sexes in man. If, from this point of view, we consider even superficially the highest pathological phenomena of this kind—such, *e.g.*, as are detailed by Mr. Hepworth Dixon in his book entitled *Spiritual Wives*—we cannot but conclude that a thoroughly comprehensive theory of the cerebro-mental changes that coincide with these higher sexual and social relations must bring the fundamental laws of reproduction into correlation with as fundamental principles of natural religion, morals, art, politics, and social science. Hitherto this department of practice has been so restricted in scope and so neglected, that phenomena like those detailed by Mr. Hepworth Dixon seem inexplicable. Little, in fact, has been done scientifically even as to the lowest range of the great series of human instincts; and the treatment of the neuroses resulting from mere excitement of the sexual organs has been handed over almost wholly to a class of men the most degraded and vicious. This is partly at least because the diseases are themselves too often the result of degrading solitary or social vices; so that the sphere of inquiry is, morally speaking, like a horrible dissecting-room, in which every sense is outraged. But this is far from the fact as to many forms of these sexual neuroses, and more especially so when “falling in love” and holy wedlock are concerned. Tennyson well denotes the high moral relations of this aspect of the subject. He says (*Idylls of the King*): “For, indeed, I know of no more subtle master under heaven than is the maiden passion for a maid; not only to keep down the base in man, but teach high thought, and amiable words, and courtliness, and the desire of fame, and love of truth, and all that makes a man.” To develop a perfect man is, in truth, the great evolutionary end aimed at in Nature by those instincts which subserve to the continuance of the species and the ever-increasing perfection of life on the earth; and it is because this is the fundamental thought in all the evolutionary series of changes leading thereto, that, in their pure “maiden passion”, two lovers are apt to believe each other perfect already, and to fulfil towards each other instinctively that great fundamental law alike of Nature and Christian morals, the abnegation of self. To those who are deeply imbued, naturally or by education, with the spiritual element, the primary corporeal instinct for sexual union, which runs like a thread through their highest aspirations thus evolved, is a never-ending trouble, and many are their efforts to subdue it. But it is an inevitable ingredient of life, since, without it, the race of man would perish from the earth. Hence it is that Shakers, Princeites, and all who have a “vocation” to become religious celibates, ignore it with difficulty, and only succeed in their efforts by wholly “denaturing” themselves, to the peril of both soul and body. Perfect Platonic love seems, indeed, only possible between those of the sexes that are devoid of this natural instinct.

It is obvious, from these considerations, that the class of sexual neuroses in both sexes must be considered as a whole, both in reference to the causes and the seat, and under the guidance of more exact general principles. And, in the first place, it is plain that the consequences of sexual excitement differ according as the cerebro-mental or cerebro-spinal centres are involved, and according as these are in a state of *erethism* or *asthenia*. It is generally believed that neuroses resulting

from venereal excesses are of a depressing character. The old rule, “*Crebram venerem ne exerceto*”, was founded on the doctrine, “*Omnia corpora post emissionem seminis debilitantur*.” It was added, too, “*Experientia testatur homines nimium indulgentes debiliores fieri*.” In accordance with these views, the older writers on hygiene laid down a stricter and more detailed regimen as to this function than the modern. Two distinct courses of debility have, however, to be considered; viz., the commonly regarded *spermatorrhoea*; and the less regarded, but not less important, exhausting excitement of the nervous system during the sexual orgasm. While the effects of the latter are manifested chiefly and primarily as cerebro-mental affections, the former affects the motor and organic systems, as well as the cerebro-mental. This is a cause of the difference in the sexual neuroses of the sexes. The seminal fluid is of a complex composition, containing, besides the secretion of the testes, that of the *vesiculæ seminales*, the prostate gland, and Cowper’s glands. It is strongly alkaline, has the peculiar odour of sawn bone, and contains various elementary bodies. But the secretion of the testes, or spermatic fluid, is very different. It is made up of cells or cell-fibrils, the so-called *spermatozoa*, and the plasma in which they move. It has no odour, and is neutral or simply alkaline. The plasma is composed, like the other portions of the seminal fluid, of albumen, a small quantity of chlorides, of phosphates and sulphates, and traces of phosphate of magnesia. But the *spermatozoa* are much nearer to nerve-tissue in composition, containing a protein compound, a butter-like fat, and phosphate of lime. (I make these statements on the authority of Frerichs.) Looking at the properties of the sperm-cell, it appears to be in truth identical, in regard to its diathetic action, with the elementary matter of nerve-tissue, and may, therefore, be considered practically as nothing less than highly developed neurine. How the sperm-cell acquires and transmits to the primordial cell the peculiarities, vital and mental, of the individual from which it is produced, is almost beyond the range even of hypothesis; but it is reasonable to assume that the process involves the whole nervous system. Whether, however, we look to *spermatorrhoea* or to the venereal orgasm as a cause of debility, excess in *venery* is a relative term; so that what would be extreme moderation in one man might be dangerous excess in another. It is, perhaps, even a still more important fact, that the nervous affections resulting, although in one sense *asthenic*, are often manifested by the irritability of debility. One very common form of this class of neuroses is *erotic irritability of temper*. Not long since, a gentleman of great intellectual activity consulted me as to an uncontrollable infirmity of temper, which was the cause of great suffering to himself and to all about him. On inquiry, I found that it was due chiefly to two causes. 1. He suffered thus whenever the exigencies of his profession compelled him to labour long at his books and think intensely. 2. He also experienced it after conjugal intercourse. If he abstained from either, the other had less effect on his nervous system. I have asked some of my psychiatric friends to note the effects of masturbation on the development of the homicidal and other aggressive instincts of the insane; and, in a certain class of cases, there is evidently a close relation between them. The period of menstruation is the period during which the ovaria are active in giving off germ-cells. Hence that state is analogous to the production of sperm-cells in the male; and, accordingly, we find that the neuroses of the menstrual period are often of a similar kind. Amongst these, there is not unfrequently morbid irritability of temper.

In another class of sexual neuroses in both sexes, there is neither impotence nor abolition of sexual desire, but a perversion of the sexual sentiments. This is commonly seen in anomalous *hysteria*, but occurs in men. A clergyman consulted me as to an indifference to, and an unfounded jealousy and dislike of, his wife, which often possessed him, although, in truth, he was most affectionately attached to her, and had not the slightest ground to doubt her conjugal affection and fidelity. Yet so unreasoning were his suspicions, that if, soon after he left his house, he saw even a well-known beggar enter the door, he was obliged to hurry back. Upon inquiry, I found that the indifference and jealousy were almost always developed either immediately after conjugal intercourse or hard mental work. To this class belong also those distressing cases in which, after a marriage of affection and in all respects happy, irreconcilable “incompatibilities” of temper arise. Nor should the *amantium ira* before marriage be left out of this list of neuroses. Not unfrequently, indeed, mania or melancholia, in various forms, thus induced, is manifested shortly before or immediately after marriage. In all these cases, there is usually a predisponent condition of the cerebro-mental centres, hereditary or otherwise, to take on the morbid action which leads to *erethism* of the genital organs; and this reacts in its turn on the centres. This seems to be the order of events in those too common cases of *erotic homicide*, like that of Miles Weatherill at Todmorden, who slew furiously those who interfered with the gratification of his amorous impulses. If his sweetheart had obstructed his desires, instead

of his master and mistress, there is little doubt but that she would have fallen a victim; and his case would then have been classed with that of Victor Townley. This connexion between genital erethism and madness has not been overlooked practically; it is a well-known form of fury in domestic male animals. In an old Scotch popular work on medicine, of date 1775, entitled *Tippermalluch's Receipts*, I find this: "For madness:—geld the patient, and his madness will cease."

Men, however, more commonly fear debility as asthenia than as irritability; and quacks of the spider genus cunningly construct traps for the hypochondriacal and nervous out of this popular notion. Here is one which appears as a *standing* advertisement in an English weekly newspaper having a highly select circulation.

"*Act of Deep Gratitude*—A gentleman who had been long suffering from a very deplorable state of nervousness, languor, lassitude, low spirits, almost constant headache, dimness of sight, threatened deafness, loss of memory and strength, in short, all zest for enjoyment and everything that renders life agreeable, has been marvellously restored by very simple means, and, as a public duty, feels it incumbent on him," etc.

This induces another kind of sexual neurosis. A strictly moral youth, innocent of all vice, but who has nocturnal emissions occasionally, and who is nervous from hard study, or heavy smoking, or religious excitement, is apt to apply the theory to his own case, and the more if he by chance have practised solitary vice, although not injuriously, so far as regards his health. He applies to the kind sympathising spider, who, of course, knows how to act upon his imagination and still further develop his nervousness; and, if by chance the victim reveals the practice that weighs on his conscience, or (what is not unfrequently the primary cause of his "nervousness") that he is engaged to be married, and doubts his sexual fitness, the spider will hardly abandon his victim until he has sucked him dry. To this class may probably be referred those persons who seem to have fled from home and friends in fear of being called upon to marry.

From these considerations, it is obvious enough what varied causes are at work in determining the special forms of sexual neurosis. All, however, occur according to the general law of defective nutrition and functional activity of the nervous system; and what, therefore, we have to determine in each case is, How far do the circumstances of the case, as to cause and symptoms, deviate from the natural order?

Another important point in the pathology of these disorders is, to what extent the morbid states of the nervous system influence the nutrition not only of other portions of the nerve-centres, but of organs and tissues generally. Masturbation is an alleged common cause, and sometimes a real cause, of pulmonary phthisis, and of various other cachectic states. It is probable that manustupration in females (improperly termed *masturbation*) not only develops irritability of the heart, but also a tendency to endocarditis and pericarditis; it certainly induces various functional disorders of the kidneys. Bacchus and Venus were said by the older writers to be the parents of gout; but they need not be conjoined, for, in the highly predisposed, Venus suffices. It is well-known to hydropathic and homœopathic practitioners, that an interruption to conjugal intercourse is the chief curative element in many cases of indefinable nervousness and ill-health in both sexes, and that treatment at watering-places and by hydropathic establishments is of comparatively little avail without this precaution. In all these varied instances, the state of the nervous system is very like that which results from mental labour and anxiety. Results differ both as age and sex differ. Very young children and very old persons (and both ages are the victims of unnatural excitation of the organs) will be differently afflicted from adults in the prime of life. What to them would be moderate sexual excitation is particularly dangerous to old men, even if conjugal. Then, again, other vices and follies, injurious to the nervous, often co-operate with those of the sexual class, as heavy smoking and drinking, sensational novel-reading, abuse of scents, and the follies and dissipations in general of town-life. To see clearly how all these are linked together, it will be useful to survey the principles of nutrition and development of tissues we have already established.

My readers will remember that, in my first contribution, I stated—1. That it was a fundamental fact of both philosophy and physiology, that, with every change in the mind or consciousness, there is a change of some kind in the constitution of the brain-tissue; 2. That, although theories differed as to the mode in which the cerebral changes are effected, it was common to all theories that they are regulated by the laws of chemical affinity; and 3. That the elementary body termed phosphorus, being an important constituent of the tissue, had been fixed upon as the chief agent in the chemical changes. Starting from these facts and principles, the inquiry has led to some important practical conclusions.

1. Although phosphorus is an important and probably essential con-

stituent of brain and nerve-tissue, it is an equally important and essential constituent of all the tissues of at least all higher organisms, whether animal or vegetable: consequently, however beneficial the medicinal phosphor-compounds may be in certain diseases and defects of the nervous system, they will be equally useful in certain diseases and defects of the tissues in general. Now this conclusion at once clears away certain pathological fallacies, and enables us to establish certain therapeutical generalisations. For example, the abundant phosphates in the urine in certain diseases are derived as much from tissues generally as from brain-tissue, and not specially from the latter, as is often affirmed. Again, either a waste of phosphates in the tissues by disease or vice, or a defective dietetic supply, will affect the nutrition and functions of the nervous system or particular parts of it; so that the administration of the phosphates, either in diet or in medicine, is essential to the perfection and restoration, when defective, of all kinds of nutrition. And this is found to be so in practice. For example, in cases of highly cachectic tertiary syphilis, full doses (small ones will not do) of iodine and potassium in combination often restore healthy nutrition; but if the patient, when cured, be placed under such circumstances that there is rapid waste of the phosphates, as in great mental anxiety and excessive thought, and some exhausting diseases, then the tissues take on unhealthy nutrition again, and syphilis breaks out afresh. On the other hand, cases of syphilitic cachexia are sometimes found to be untouched by full doses of iodide of potassium alone (I have given it up to half a drachm); but, if the syrup of the phosphates be added, then beneficial results follow at once. The phosphate of lime, either pure or better as ivory-dust, is an excellent tonic in various forms of struma and phthisis, just as it is a tonic for unhealthy plants. Further, it is of practical importance to remember, in considering the therapeutics of the neuroses, that besides the grey and white matter which constitute the tissue proper of the nervous system, there are blood-vessels, lymphatics, and connective tissue, which may be primarily if not exclusively diseased in syphilitic, gouty, and other diathetic neuroses, and in hereditary brain-diseases like insanity.

2. And this points to the fact that other constituents of living tissue are as necessary to healthy nutrition as phosphorus, or its analogue sulphur, so abundant in the albumen of the egg and in muscles. Such are the non-metallic bodies, chlorine, iodine, bromine; and the metallic, iron, calcium, potassium, magnesium. All these are as important, both pathologically and therapeutically, as the "flesh-formers" and "heat-producers" of the chemists. In rheumatic fever and some kinds of chronic rheumatism, sulphates are eliminated in excess, as well as the uric and lactic acids commonly noted. Certain fibrinous states of the blood, which favour rheumatic attacks, are in the same category. Hence the relations of phosphorus and of the heat-producers and flesh-formers to these other elementary bodies must be examined, if we would accurately observe the results of the influence of the nervous system on nutrition of tissues—as, for example, in gouty diseases, rheumatic fever, dropsies, tuberculosis, and all blood-cachexiæ. Consequently—

3. Although the physician can have no objection to the doctrine of the correlation of the physical forces, as a basis of biology, it is plain that in the results of chemical affinity we have not merely motion (kinesis) to deal with, but motion and orderly arrangement (diathesis); and that it thus operates according to a law of evolution and differentiation in both inorganic and organic chemical compounds. Now this law of evolution is the fundamental law of life and organisation; so that we, as physicians, have not to deal proximately with the correlation of the physical or kinetic forces, but with diathetic forces; and the correlations of consciousness are not directly with merely physical force, but with diathetic or vital forces, as manifested in evolutionary series. And this conclusion places heat in its proper relation to chemical affinity, as a conditioning force, and heat producers in their proper relations to the diathetisers, like phosphorus, sulphur, and iron, for which organic chemistry finds systematically no place. Hence the phosphorised fats of sperm-cells and nerve-tissue have an important relation to cell and brain-function in regard to the evolution of heat within the tissue. It is probable that cod-liver oil as an iodised fat owes its medicinal efficacy to a similar relation to the diathetisers in the tissues generally. A knowledge of the relations of heat to vital changes is, therefore, one of the chief elements of a true nervous pathology. Many local affections, both in cerebro-spinal centres and in organs, whether functional or structural, owe their origin and their course to local morbid changes in temperature, either in excess or defect. Indeed, it is to me more than probable, that certain obscure functional disorders of the brain involving the mind are due exclusively to locally abnormal temperature of brain-tissue. The great centres are so shut in by fleshy and bony coverings, that variations in temperature of particular centres or portions of centres cannot arise directly from without; and therefore, if they do occur, must depend upon changes in the vital activity of the

tissues themselves. Such changes in temperature do doubtless occur consecutively to changes in vaso-motor activity. I do not, however, refer to this class of changes, but to another, in which the local increase or diminution of temperature precedes and is the cause of the increase or diminution of vascular action. This point, however, needs special investigation.

4. The law of evolution of composition of tissues and of function is correlative with a law of evolution as to mechanism of organs, and this with an evolution of mental states, as instincts, appetites, passions, sentiments, intellect. This is well seen in all the personal instincts and feelings; but it is not the less manifested in the sexual and reproductive. The sexual neuroses may, therefore, be classed both anatomically and evolutionally. They may be either motor, or sensory, or organic, according to the nerve tissue chiefly involved, and these again may be cerebro-mental, cerebellar, spinal, or purely local. That difference of sex is a cause of difference in the character of the neurosis is one of the most certain of clinical facts. Thus tabes dorsalis and locomotor ataxy are comparatively rare in women—as rare as hysteria and Graves' disease in men. These diseases and their pathology merit, therefore, special examination.

OBSTETRIC MEMORANDA.

[UNDER this head, we shall, from time to time, as materials come to hand from correspondents, publish records of cases remarkable in themselves, or illustrating points of interest in obstetric practice, therapeutic or manipulative. We shall probably in this way preserve from oblivion the notes of very many useful and instructive occurrences in private practice; for the great obstetric experience is that—for the most part hitherto unwritten—of the great body of general practitioners throughout Great Britain. We will only ask those who may forward cases for record, to relate them with the utmost brevity, and equally to condense any appended remarks.]

CASE OF LOCKED TWINS.

By EDWARD WOAKES, M.D., Luton.

ABOUT eight years since, the following case occurred in my practice. A primipara, aged about twenty years, suffered severely during the last two months of pregnancy from albuminuria and its concomitants. Labour set in slowly at full term, completing the first stage in about twenty hours, when the pains all but ceased. Her symptoms being urgent—prostration and headache—and the presentation natural, I decided to facilitate delivery by turning. In doing this a second child was discovered, also with the head presenting, but this fact did not, at the time, suggest any source of difficulty. The body was born without any check, but the head would not follow. The arrest of progress was found to be due to the head of the second child, which, during the process of turning the first child, had descended into the hollow of the sacrum, and presented, by its projecting occiput, an impassable barrier to the passage of the first child, the occiput of one being closely wedged into the nape of the other, both being unable alike to advance or retreat. The pains hitherto absent now set in with frightful violence. At this time I had neither heard nor read of a similar case, and it became evident that I must shortly adopt some course of action, as every moment the perinæum and rectum threatened to give way before the violence of the pains. A medical friend arrived in time to sanction what I had concluded to be the only alternative, viz.—amputation of the head of the first child, pulsation having long ceased in the cord. This was easily done with a penknife, the readiest instrument at hand. The severed head at once receded, while the second child was born without a moment's pause, and fortunately without injury to the soft parts of the mother. It was quite dead. No further difficulty worthy of record occurred, and the patient made a good recovery.

REMARKS.—This case strongly impressed on my mind the *undesirability of turning the first child in twin-labours*. It is this induced character of the complication, and the lesson it suggests, that constitutes the special interest of this case. The best method of dealing with locked twins is still a moot point. Dr. Barnes suggests the desirability of disentangling the children with the aid of external manipulation. In my case, the violence of the pains precluded the possibility of adopting any course, excepting such as would induce immediate delivery. The alternative then lay between decapitation of the first, or craniotomy of the second child. The latter procedure was adopted in a case recorded in the JOURNAL last October; but, as it necessitates the death of both children, I should still be inclined to prefer decapitation as holding out the best prospect of saving the life of the other child.

THERAPEUTIC MEMORANDA.

BY

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No. III.

Asthma.—The old division of *siccum* and *humidum* is an excellent guide to treatment; the one kind being that in which spasm is predominant, whether complicated or not with emphysema; the other being spasm mixed with bronchitis or bronchorrhœa. For the relief of mere spasm, my experience would place the well-known remedies in the following order: Chloroform-inhalation, ether, nitrous vapour; belladonna, stramonium, opium. In favour of belladonna, a strong impression was many years ago made on my mind by some experiments of my friend Dr. C. J. B. Williams on animals; and the impression has been deepened by my subsequent bedside observation. I prefer the liquid preparations, especially Battley's liquor belladonnæ; and I generally combine it with bicarbonate of potass. When some amount of recent bronchitis is present, antimony or ipecacuanha should be added. In cases less congestive or non-inflammatory, but still attended with and relieved by mucous flux, squill is the better expectorant. The relief afforded by chloroform is almost too great. It is difficult to prevent excess. Not long ago, I had great difficulty in reducing a young lady's allowance to two ounces *per diem*. The efficacy of other remedies is greatly assisted by mercurials, independently of the importance that almost every asthmatic finds in the due action of the liver. Cholagogues and purgatives have, owing to the violent reactions and revulsions to which medical opinion is subject, gone somewhat out of fashion; but observation has taught me that, in the treatment of chronic diseases of the respiratory organs uncomplicated with diarrhœa, no subsidiary agents can rival those which maintain a free action of the liver. This remark only confirms the *à priori* expectation founded on the knowledge of the mutual antagonism of the lungs and the liver afforded by comparative anatomy and physiology. For the prophylactic treatment of the intervals between the paroxysms, whether for abating that morbid susceptibility of the respiratory nerves which engenders the spasmodic paroxysms, or for diminishing the liability to catarrhs, I know nothing to surpass long courses of oxide of zinc (with or without extract of conium), for the one indication, and of quinine for the other. Much may be done by judicious hygienic treatment. The young and tolerably vigorous may harden themselves by cold shower-baths or sponging; and patients of all ages and constitutions may be taught so to regulate their diet that no needless irritation should be propagated from the gastric nerves to the medulla oblongata, and that the function of the liver should be assisted.

Pleurisy.—There is no inflammatory disease more promptly cured, when its commencement has been promptly detected; but its onset is apt to elude the vigilance of even practised observers. It may begin on a little patch of the membrane over the base of the lung, and be easily taken at first for a rheumatic or neuralgic pain; or its origin may be on the diaphragmatic surface, and give rise to a reflected pain in the neck or the shoulder; and, if this happen on the right side, it is often assumed to denote disorder in the liver—irritation of the diaphragmatic peritoneum over the liver having been long known to be productive of a like remote sensation. So pleurisy often steals a march on the practitioner; and, when detected, it has already begun to accumulate inflammatory products in the sac. But, if caught early, it is easily extinguished. In old days, when there was no reason as now for fearing the constitutional results of a little sharp practice, a patient would be bled from the arm to-day, take a dose of calomel and opium to-night, and be convalescent to-morrow; but, even in these milder times, the disease is not long in giving way to a few leeches, or even to hot fomentations and poultices, or rubefacients and blisters, aided by profound rest in bed. If effusion have begun, no time must be lost before blistering. Mark out the space, so that, at intervals of two or of three days, not longer, there may be a succession to the anterior, the posterior, and the lateral region. Give alkaline carbonates freely, combined in the first week with spirit of nitrous ether and small doses of antimonial wine, and a nightly anodyne, with blue pill, or grey powder, or calomel. Should the gums chance to get sore, no matter. In ninety-nine cases out of a hundred, nothing but good ensues from it, saving a little temporary inconvenience; and, as to risk, it is nothing, compared to what one incurs in inhaling chloroform for a surgical operation, or in taking one's seat in a railway-carriage. But this occurrence is by no means necessary to cure, and is to be here regarded rather as an accident