

Enniscorthy, and Londonderry are highly commended, and Mullingar receives, as usual, unstinted praise. We are sure this is well deserved, and we congratulate Dr. Finnegan on obtaining what he merits, not always easy in official life. We are told that St. Patrick bestowed a certain see upon a favourite disciple with these words, "Found, then, a church there, that shall not be so near us (*i.e.*, so near his own primatial city) that we must jar, nor so far away that we cannot often meet." Mullingar is about fifty miles from Dublin.

The average annual cost per head varied in the Irish District Asylums for the year 1893 from £25 2s. 8d. at Mullingar to £18 11s. 1d. at Castlebar. We cannot comprehend how it is possible to maintain a lunatic for the latter sum in an asylum for less than 500 patients, especially in Ireland, where all ordinary repairs and alterations are charged to maintenance account.

The Inspectors continue to deplore the manner in which the insane in workhouses are mismanaged.

As in previous years, they regret the insufficient provision for middle-class patients.

They also point out again that some of the private asylums are not flourishing concerns. It is doubtless too much to expect that the management of any place of the kind will be satisfactory when it does not pay.

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*The Insanity of Over-Exertion of the Brain: The Morison Lectures, delivered before the Royal College of Physicians, Edinburgh, 1894.* By J. BATTY TUKE, M.D., F.R.C.P.E., F.R.C.S.E. With Illustrations and Diagrams. Edinburgh: Oliver and Boyd. London: Simpkin, Marshall, and Co.

This work consists of five lectures. Taking these *seriatim*, we find that Lecture I. sketches the progressive alteration and development of our conception of the conditions included under the designation "Insanity." It is observed that the popular view of insanity, down to a period not very remote, had been "entirely psychological, at the best . . . but a rude mixture of a pseudo-psychology and of a pseudo-pathology. . . ." Furthermore, the older physicians are not credited by Dr. Batty Tuke with any more enlightened conception than the above. We are reminded how that everywhere men

bowed down to and worshipped the psychological principle, and approached the study of insanity with feelings of mystery not experienced in presence of the ordinary diseases of the flesh. Of late years we have grown more sceptical and materialistic in our views as we have advanced in our knowledge of nervous anatomy, physiology, and pathology. We still grope, it is true, in a pitchy darkness; but the awesome feeling, erstwhile so powerfully deterrent, has no longer its old force. Dr. Tuke accords a due measure of admiration to the labours of those to whom we owe our present knowledge of the central nervous apparatus, and expresses the hope that in the future the insanities may be worked at "on the same scientific principles that govern our views of disease at large."

Most appropriately, our attention is then invited to the study of a cerebral convolution, in which much assistance is afforded by a diagrammatic sketch of the constituents of a convolution, largely founded on plates by Retzius, Cajal, and Andriezen. The silver methods of staining, on which this diagram depends, are doubtless still new to many in this country, who will be able to form from it some idea of the remarkable results obtainable by those methods. The author follows the description of Cajal.

We consider such a diagram of great service in assisting us to "visualize" the apparatus of the cortex. As incidental to its consideration, we may be allowed to express a fervent hope that peace may some day reign in respect of the vexed question of the proper nomenclature of the leptomeninges. Between "visceral pia," "parietal pia," "arachno pia," and "arachnoidal lining of the dura," the mind of the hapless student has been reduced to an acute confusional state. To such an one it will be good news indeed that Dr. Tuke advocates the abolition of the term "arachnoid," and would speak of a "visceral pia"—which dips into the sulci—and a "parietal pia"—which passes across them; there being no membrane between this latter and the dura. The diagrammatic sketch enables one to visualize with great facility the course of the lymph-channels in the cortex. It may not be out of place to intimate to potential investigators that, whilst not questioning the existence of pericellular lymph-spaces (about nerve and neuroglia cells), the demonstration of such, in our experience, is extremely difficult; and the presumptive evidence for their existence, drawn from the silver-method, is, in our opinion, not at all satisfactory.

Lecture II. discusses the effects of continued hyperæmia of the brain-cortex, and of fatigue, the result of psychical activity. The experiments of Hodge upon the effects of electrical stimulation of nerve-cells are described (with plates); and the conclusions arrived at by Dr. Tuke from a personal examination of certain of the actual specimens are stated. The altered reactions to stains, and the nuclear changes exhibited by cells which have been subjected to such stimulation, are most interesting, in view of like alterations observed in the brains of the insane.

In this association the evil effects of (theoretical) obstruction of the lymph-channels are dwelt upon. Implication of these structures may be legitimately supposed to occur in association with hyperæmia. The solutions of continuity of the brain-elements (produced by vascular congestion) which are described in this lecture are believed by Dr. Tuke to be the causes of the early symptoms of insanity from over-exertion of the brain.

Next follows a description of a chain of symptoms (*i.e.*, of insanity of over-exertion) which the author attributes to the conditions sketched—a *symptomen-complex* which, we apprehend, is presented from time to time to medical men outside asylums. We consider that it is legitimate to refer such symptoms to the influence of hyperæmia, and the morbid exudates and collections associated therewith. At any rate, there appears to us a greater justification for making such a reference than exists for ascribing a motley group of symptoms of malaise to a "congestion of the liver," as is often done. Moreover, the theoretical pathology is of service, since, founding upon it, we are enabled to dictate with greater emphasis the policy of rest.

Lecture III. is occupied by a consideration in further detail of the pathological changes occurring in the cortex in cases of insanity, with special reference to those ascribable to over-exertion of the brain; the subject of colloid and miliary changes is also treated of; and, lastly, that of cerebro-spinal fluid pressure. "Colloid bodies" and "miliary sclerosis" are terms with which Dr. Batty Tuke's name is naturally associated, and therefore it is interesting to observe his present position—as indicated by the quotation which follows—in regard to the conditions which they connote. "The latter lesion was described by me many years ago, along with Prof. Rutherford, and I am mainly to blame for the error enunciated as to its genesis and name. Bevan Lewis

convinced me that colloid bodies and so-called 'miliary sclerosis' were aggregations of myelin, derived from the investment of nerve-fibre."

But the chief purpose of this lecture would seem to be the development of a line of argument which culminates in the statement (sufficiently remarkable) that "on the rapid removal or non-removal of the causes of implication of the cells of the Rolandic area depends the issue of the case" (*i.e.*, of insanity from over-exertion)—"recovery or prefrontal atrophy." The argument is based upon the fact that, alike macro- and microscopically, the chief indications of disease in those dying insane are located in the Rolandic area. In the giant cells especially (amongst the pyramids) the evidence of degeneration is pronounced. Now, there are "the very strongest reasons" for believing that kinæsthesia (transmutation of sensory stimulus into motion) occurs in the pyramidal cells of the Rolandic area, and other transmutations of energy doubtless occur there also. The organs of the Rolandic area have an influence over other regions, and if these organs (cells) are over-stimulated we may expect remote effects. Amongst these would be perversion of psychical acts, which gradually develops as the impaired function of the cells of the kinæsthetic area makes itself felt on the cells of ideational centres. From this point it is a natural step to the conclusion set forth in the culminating sentence we have quoted. We have said enough to indicate that there is much that is controversial in this lecture.

Lecture IV. deals with the somatic symptoms of over-exertion of the brain and various theoretical matters arising out of their consideration. Whilst on the subject of the disturbances of the menstrual function which are occasionally present, the author permits himself a slight excursion, in which he considers the relationship (often a mistaken one) between various bodily disorders and insanity. In this connection it is satisfactory to us to observe that Dr. Tuke has no sort of sympathy with those who glibly refer mental disorders to menstrual disturbance and to diseases of the female generative organs.

Lecture V. opens with a statement of the main conclusions reached in the previous lectures, *viz.*, (1) over-exertion of the areas forming the substrata of consciousness produces changes, evidenced by both physical and mental symptoms; (2) the primary change is a congestive one; (3) secondary changes may occur, injuring connection-systems, and result-

ing in chronic insanity. Thereafter a strong plea is entered for the study of the insanities in the same rational mode as is adopted in the study of other diseases, namely, by way of the anatomy of the part affected. Without minimizing the importance of clinical observation, Dr. Tuke protests strongly against the tendency manifested by the specialty (or a section of it) to give prominence "to a sort of pseudo-psychology." Such terms as "medico-psychologists" and "psychiatric medicine" obviously inspire him with but scant respect. The asylum psychologist does not rank high in his estimation. Personally, we feel indebted to Dr. Tuke for his refreshing plainness of speech, and, under his protection, would respectfully protest against the exceeding dilettantism of asylum psychology. We believe that in asylums by far the most weighty contributions to our knowledge have resulted, not from "attempts to analyze the psyche," but rather from the careful study of a brain convulsion; that, whilst the former is the more soulful, the latter is the more fruitful pursuit.

The question of the treatment of the insanity of over-exertion occupies the remainder of this lecture, and calls for no special observation from us, beyond the remark that, the conditions to be dealt with being those of over-stimulation and exhaustion, the main principle of treatment is Rest.

In the foregoing lectures Dr. Batty Tuke has furnished an account, at once carefully thought out and clearly expressed, of a variety of mental disturbance with which the average student of insanity may be said, without disparagement, to be inadequately acquainted. It behoves those whose work lies in the midst of so much mental wreckage to acquaint themselves precisely with the characters of a malady which leaves its victims open to rescue. Its features are sharply delineated in Dr. Batty Tuke's pages. It may be thought that certain of the theories advanced are assailable; that the pathology (from obvious considerations) is largely speculative. Few, however, will be prepared to deny that it is a good working pathology.

With these observations we commend to the medical reader, whether general or special, a monograph worthy his consideration. The paper, print, and binding are all that could be desired.