"Hereditary neurosis in Children": a paper read in the Section of Mental and Nervous diseases, International Medical Congress, Moscow, August 1897

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Hereditary Neurosis in Children.

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Neurosis may be defined as an abnormal condition of the nervous system tending to disorder of function. Disorderly action is doubtless dependent upon abnormality of structure, albeit our present means of research do not enable us to detect the precise deviations from the normal in the minute anatomy of the nerve elements upon which their morbid irritability depends. The

recent observations of Ramón y Cajal, Golgi and others upon the relations of the constituent portions of the nerve-cell throw a new light upon the subject; and, as Sir William Gowers remarks, our previous misconceptions may "Explain the entire lack of all morbid anatomy of such diseases as Chorea, Epilepsy and paralysis agitans, for we have hitherto been looking in the wrong place, & have scarcely yet learned the alphabet by which to read the words that may perhaps be written in the true locality."

Whatever the essential nature of Neurosis, there can be no doubt as to its hereditary character. That which is inherited is not, however, the specific abnormal function; it is the predis-position to disorderly action when

Subjected to the nervous system is subjected to stimuli to which it is specially obnoxious. This of course implies abnormal irritability of the nerve tissue, or (to use a chemical metaphor) its constitution is unstable and tends to explosive action. Such action may be produced in a variety of ways — it may be from external causes, but more often from morbid conditions within the individual organism. Fright or shock may, in some rare instances, be the cause of a convulsive seizure in a child of neurotic inheritance: more frequently morbid conditions of the blood, such as we meet with result from the presence of bacterial or auto-genetic toxines, or from mere impoverishment, will excite nervous symptoms. The

influence of reflex irritation has of late years been somewhat put in the background by the bacteriological School of pathologists: yet there is evidence that in childhood at any rate it is not an unimportant factor in the production of neurosis. It is, indeed, interesting to note how predisposition, such as is implied in neurosis, comes into special prominence in the case of reflex irritations. The abnormally irritable reflex centre determines in the neurotic child the occurrence of symptoms which do not occur in the non-neurotic child, though the same peripheral morbid conditions may exist in each. Thus in first dentition it is not the difficulty of eruption of the tooth that determines eclampsia: it is

the inherited irritability of nerve tissue.
Take eye-strain, again, which of late
years has assumed importance as
a suspected cause of epilepsy: it is probable
that it is only in cases hereditarily
predisposed to nervous disease that it
is an efficient factor, eye-strain
without epilepsy being common enough
in normal young people. We see then
that in children of neurotic inheritance
irritations from without, from within,
or from the periphery, are apt to produce
nervous disturbances; & we may add
that these may be sensory, motor
or psychic in manifestation. As examples
of the first we may instance migraine
& neuralgia; of the second, eclampsia
& epilepsy; of the third, night-terrors,
temper-disease, & moral imbecility.
It must be borne in mind with regard

to the last-named, that "mental disorder is" (in the words of Maudsley) "neither more nor less than nervous disease in which mental symptoms predominate."

In so-called nervous families we shall meet with many varieties of nervous disorder. The form of neurosis is not necessarily identical in succeeding generations: the manifestations of nerve disorder are indeed apt to differ in members of the same generation. Thus a man subject to spasmodic asthma (truly a neurosis, though not always recognised as such) marries a hysterical woman. They have a progeny of seven, five of whom survive to adult life. The eldest, a son, inherits his father's tendency to asthma but grows up a scholarly man, suffering however a good deal from

neuralgia when he is free from asthma –
The second child dies in infancy of
convulsions. The third, a son, does
no good at school, but shows artistic
talent & becomes a painter of merit, though
in the ordinary affairs of life, an "eccentric".
The fourth, a daughter, is precocious,
excels in music, but like her mother, is
strongly emotional, & after an injudicious
'love-affair' develops symptoms called by
her friends hysterical but really of the
nature of mania. The fifth, also a
daughter, suffers from night-terrors
in infancy, is hyper-conscientious over
her school work & becomes neurasthenic,
finally ~~becoming~~ figuring as a religious enthusiast.
The sixth, born prematurely, dies a few days
old. The seventh, born at some interval
after the others, is the subject of Mongol
Idiocy. Such a family history is typical

of many others that might be cited, but in England it is difficult to trace the physiological pedigrees of families liable to become scattered over the British Empire. In more stationary populations such as those of Scandinavian countries this can be more readily done, & Dahl has collected a number of Norwegian family histories (some of which are translated in D. Ireland's book on Idiocy) which strikingly demonstrate the transformations of neuroses in succeeding generations. One of these is subjoined.

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for pasting on
printed genealogy)

From the above it will be seen that in the course of three generations showing neurotic manifestations, out of 27 persons, there were as many as 5 idiots, 4 lunatics, 4 deaf mutes & 1 epileptic, a tendency to neurosis fifteen times as great, according to Dahl, in this family as in the other families of the same parish. The tendency to extinction of a degenerating family is also illustrated by this pedigree; a subject exhaustively treated by Morel in his "Traité des Dégénérescences de l'Espèce Humaine."

Amongst children the influence of neurotic inheritance may be shown by congenital imperfection, physical or functional, of the higher nerve centres. Of idiots & imbeciles no less than 22·71 per cent (according to the statistics of Flesberg

Dr. Fletcher Beach (Hack Tuke's Dictionary of Psychological Medicine vol II. p. 664) ~~less than 22·4~~ have a family history of insanity, & 36.86 per cent of Epilepsy or some other neurosis. Parental alcoholism is no doubt a frequent cause of nervous instability in the offspring, & figures as a factor of feeblemindedness in 19.57 of Beach's cases & in 13·25 of Shuttleworth's. Teething fits may, in the majority of instances, be looked upon as a manifestation of hereditary neurosis, & the frequency with which they have occurred in defective children (32·5 D of Shuttleworth's cases & 22·11 of Beach's) confirms this view. Epilepsy, as distinguished from eclampsia, first occurs in children under seven, according to Gowers, in 23 per cent of all observed cases, three

being the cases in which neurotic heredity is especially marked. A family history of epilepsy or insanity was ascertained in one-third of the 1450 cases tabulated by Gowers.

Certain inherited constitutional taints appear to have a distinct relation to neurotic manifestations in childhood. Most notable is the influence of a phthisical parentage upon mental deficiency in the offspring. In the etiological table drawn up by Dr. Beach & the prescriptioner, showing the factors of causation of idiocy & imbecility in 2380 cases, it was noted that a phthisical family history existed in no less than 28.31 per cent. Maudsley has indeed argued that "a morbid neurosis may manifest itself not only in disorder of sensation, motion or mem-

-tability but also in disorder of nutrition, whereof diabetes is the earlier, & phthisis the later stage". The blend of phthisical & neurotic parentage seems specially liable to produce defect in the offspring.

There is a type of nervous degeneration in children, resembling general paralysis in adults, due to inherited syphilitic taint. Though this scarcely falls under our definition of neurosis, it is of interest in this connexion as showing how impure blood (blood probably charged with bacterial toxins) interfering with the due nutrition of the higher nervous centres, produces in them an abnormal irritability giving rise to convulsive symptoms & an incapacity for sustained mental exertion. It is notable, also, how consanguineous parentage [illegible] of

34 cases of "General paralysis of the young" recently collected by Alzheimer (Allg. Zeitschrift für Psychiatrie LII. fasc. 3) hereditary syphilis was certain or probable in 28, & in more than half the cases there was also neurotic heredity.

Consanguineous parentage may be dismissed in a few words as productive of neurosis in the offspring only when there is a neurotic predisposition in the common ancestry. In such cases what may appear in each of the parents as only a very insignificant degree of neurosis - mere nervousness (a "high-strung" condition as it is sometimes called) may assume in the children an intense form amounting to intellectual defect, or such defect of moral control as may lead to criminality.

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Richarz arrived at the following conclusions based upon an exhaustive study of hereditary transmission: -

First, that neurotic ~~mental~~ defect is more frequently transmitted by the mother than by the father

Secondly, that the inheritance is more likely to fall either to one of the same sex as the parent affected, or to the child most resembling that parent. He gives furthermore a sequence of liability in inheritance - a liability naturally increased where both parents are neurotic, or where reinforced by consanguineous marriages.

On the other hand we may ask what indications do observed facts & statistics supply us in the way of prevention of the transmission of

neurosis by heredity? In the first place the intermarriage of neurotic persons, or of cousins of common neurotic ancestry, should in view of risk of intensification in the progeny, be considered as reprehensible from the sociological standpoint. Happily there is a tendency on Nature's part to restore the balance if only she be not thwarted; & if the law of reversion to the normal type be allowed free play, an ancestral neurotic taint may gradually disappear. It is much to be desired that matters matrimonial not only from the sentimental & pecuniary but should be looked at from the physiological point of view, & parental responsibility duly considered in the selection of a partner for one of known neurotic antecedents.

Another, perhaps more practical, consideration is the mode of up-bringing

and education of children of neurotic inheritance. As physicians it is our duty to warn parents against the harm that results to neurotic children, who are not infrequently precocious, from subjecting ~~them~~ their immature, if over acting, brains to the stimulus of ordinary school education. Teachers moreover must be impressed with the idea that such children are "excitable, unstable, & under feeble inhibitory control", & that a routine adapted to the ordinary pupil is not appropriate to them. An absolute freedom from book-learning in the early years of life, with such arrangements as the Kindergarten affords for cultivating habits of observation, & disciplining the emotions, is the best system to follow;

and at a later period the pernicious practice of pushing on rapid brain development for the purpose of competitive examination must be rigorously eschewed. It is impossible of course to change the child's ancestry; but by judicious care inherited nervous weakness may be prevented from developing into actual disease. In this age of over-pressure, when disease of neurotic type is so prevalent, it seems specially important that the teacher should learn to recognise the signs of nervous over-action and exhaustion; and it is satisfactory to notice that in some countries there is a disposition to co-operation on the part of medical men & of those of the teaching profession in improving our educational systems.