irritating fluid, a septic element caused by the decomposition of adherent food particles is present.

The symptoms noticed at the first moments are an intense burning of the labial and buccal mucous membranes, a scalding sensation in the throat, and an intense burning in the epigastrium. In many cases, though not in the one now recorded, vomiting occurs. The agony at the first may be almost unendurable, and shock is profound.

In the larger number of cases there is soon a marked difficulty in swallowing; when a few drops only of fluid are swallowed the pain elicited may be excessive. Thirst is intolerable, the soreness of the lips and mouth when the sloughs begin to separate is terrible, and a raw bleeding surface may be left. Vomiting is an early and a constant symptom; even when a very small quantity of fluid is taken it may be ejected at once or in a few minutes.

The character of the symptoms changes after a time, according as obstruction, due to cicatricial contraction in healing, is caused in the oesophagus or in the stomach. When a stricture forms in the gullet, it is almost always at the upper end; when in the stomach, it is at the pylorus and in the pyloric antrum. In an apparently favourable case the local conditions quickly clear up, and fluid food may be taken in fair quantity and retained; but, after the lapse of three or four weeks or more, vomiting, which has been absent or in abeyance, returns more seriously than before. The stomach dilates, and its muscular walls hypertrophy until the usual clinical picture of pyloric stenosis is produced in its most exemplary form.

In other cases the characteristic signs of obstruction in the oesophagus are produced, and in still others there may be obstruction both in the oesophagus, at the upper or lower end, and at the pylorus.

TREATMENT.

In all cases it is of the first importance to see that there is complete abstinence from food of any kind. By giving food the process of ulceration is quickened, the ulceration spreads, gangrene in more or less extensive patches occurs, and a virulent septic process is set going. The chief attempt should be directed to keeping the scalded surfaces sweet and clean. Mouth washes, sprays, gargles, frequent mopping of the ulcers with gauze swabs, all are useful in helping to ensure cleanliness. The administration of saline enemata by the rectum will help to relieve thirst to some extent.

It is probable that in all cases the safest course will be to have an early resort to surgery. By means of some operative procedure the feeding of the patient can be ensured for such a time as will allow healing to take place in the ulcerated patches.

The two operations—one of which will usually be needed—are gastrostomy, when the oesophagus alone is affected, and gastro-jejunostomy combined with gastrostomy, when the pyloric portion of the stomach is most injured. Duodenostomy, as practised by Hartmann, or jejunostomy alone, suffices merely to feed the patient for a time. They do nothing towards securing him against the almost certain troubles which will result from the mechanical obstruction at the pylorus due to the healing of the deeply ulcerated mucosa.

The operation practised in this case effects two purposes: it enables the patient to be fed while healing of the ulcerated surfaces is in progress, and by means of the gastro-enterostomy it establishes an alternative route from the stomach when the pylorus is closed by the contraction of the cicatricial tissue deposited in the ulcers.

UNDER the will of the late Mr. Joseph Fox of Lindley, Huddersfield, who died on January 12th, the Huddersfield and Agbrigg Infirmary receives a sum of £500.

STRASSBURG DOCTORS AND FEES.—The doctors of Strassburg have decided to follow the example of those of Berlin and some other large cities of Germany by raising their scale of fees. They have, however, bettered the instruction of their colleagues. Thus it has been agreed that visits at their own houses are to be paid for at the time. Visits to patients' houses, unless arranged for before 9 in the morning, are to be charged for at double the usual rate. For night visits, between 8 p.m. and 8 a.m., and for visits made on Sunday afternoons the fee is to be trebled. Consultations by telephone are to be charged for at the same rate as ordinary consultations. Accounts are to be sent in at least every six months.

The Lumslean Lectures

ON

INSANITY, ITS CAUSES AND INCREASE.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS, OF LONDON.

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LECTURE II.

THE CAUSES OF INSANITY.

IN this lecture I purpose considering some of the chief causes of insanity, and giving my opinion as to the part played by them in any increase which is evident among the insane. I shall in order take heredity and its influence, alcoholic excess, and lastly, influenza and its special effect on the increase of neuroses generally.

Much has been written on heredity of late, and still we are not in possession of a clue to what is and what is not transmissible. I accept it as a fact that no mutilation of, or late acquisition by, a parent will be passed on to children, but I must insist upon it that there is a very potent passing on of some tendency to neurosis. There is a common idea that all insanity is inherited, and also that all forms of insanity may be inherited.

The solution of the question whether this is true has far-ranging influence—first, medically and educationally, next socially, as to the right of those belonging to highly-neurotic or insane families marrying and having children. Of course, when there is the tendency in two persons, marriage by them should be stopped if possible.

There is, however, a strong tendency to breed out of neurosis if one of the mates is strong, healthy, and not related to the other. Consanguineous marriages are not dangerous from mere nearness of kin, and the old idea that the deaf and dumb and feeble-minded owed their weakness to such cousinly marriages has not been confirmed. It has been suggested that some of the increase is due to children being begotten by parents only partially recovered, and who have been discharged during their convalescence from asylums. By careful examination from reports of superintendents of asylums this has not been confirmed. Such cases have occurred in my own experience, but they have been very rare.

Neurotic heredity may be compared to the mycelium of a fungus which, unseen, spreads far and wide, and only sends up the fungus as evidence of its existence when conditions suitable to its growth are present.

I have to allow that there is such a thing as a pretty definite neurotic stock or type, but insanity as such is not transmitted, though with the insane there is a strong tendency to produce offspring who are unduly unstable. Insanity, like all highly-specialized mental capacities, genius, etc., tends to extinction or to nervous instability in the following generations.

The children of lunatics may be only neurotic, and never become insane, but the children of the lunatic whose insanity depends on marked brain decay, such as general paralysis, alcoholic insanity, and senile mental disorders, are likely to be mentally weak or morally insane. I have found that any great special power, whether mental or even muscular, is associated with danger. I have had a patient tell me that my safety depended on a dead level of respectability, while his instability depended on family genius.

It is interesting to note that tricks or habits may reappear in children, just as slight bodily peculiarities like the extra finger or toe. If we follow Darwin we should expect only very slight variations to occur and to recur. This is seen in the handwriting, which frequently is very similar in parents and children.

From these general remarks I now pass to concrete evidence. I have known a woman who was already insane, and incurably insane, have children who have, at least for years, remained free from insanity, though some have been unstable in other ways. On the other hand, I have known children of mothers who appeared to be sane during pregnancy yet became insane after delivery, develop insanity early in life or even to be feeble-minded from the first.

In these cases my hidden mycelium bore its part. Truly insane parentage may lead to neuroses of various kinds, to asocial states and to criminal tendencies. One meets with whole families of idiots just as one meets with families in which some special forms of paralysis recur; in these cases the parents are often, I would say generally, not insane, though peculiar in some way. They resemble the old chemical experiment in which two clear solutions being added a black precipitate followed. It is possible that we, or rather our successors, may be able to gauge the stability of nervous tissues quite apart from their chemical structure, and they may thus be able to assist in the diagnosis of such dangerous compounds.

There is no probability that coarse brain lesions in a parent are in any way causes of insanity in the offspring. The question as to the relationship between neurotic heredity and general paralysis is still unsettled, some of the more recent writers considering that a large proportion of general paralytics have a clear history of neurosis in their families. I am free to admit that my experience is that a small proportion only of the cases I have seen have any such history. I have already said that some forms of insanity almost always occur in patients who have a strong heredity of neurosis, but in a sense a man may produce the same symptoms in himself by alcoholic excess and the like.

It must not be forgotten that there is danger of association between an insane parent and a child. I have seen a good number of children who, living with insane mothers, have developed the same or similar delusions. Similarly I have known daughters who, having nursed a parent for a long time, up to their deaths, developed similar symptoms of a purely functional type.

It is often said that there is a special tendency to transmit suicidal inclination in families, and I allow that there are many cases in which suicide has been the common end of members of a family. This is only another confirmation of my experience that melancholic states are very bodily in their origin, and are not uncommon in members of one family.

It seems unlikely from what I have said that there can be any transmission of any definite idea. I have, however, met with several instances in which both parent and child have said that they were the unpardonable sinners. This of course means only that they both lived in a similar religious atmosphere, and were also inclined to melancholia. I have met, too, with parents and children having similar obsessions, such as dread of crowds, of solitude, of dirt, or of heights. Here again we have the transmission of the unstable nervous system, which reacts unduly to social conditions. These obsessions, as a rule, do not get much worse, and do not destroy mind, as some of the invading disorders which occur in the delusional cases. Marriage of such persons is very likely to produce children with similar instability, but with little real danger of the more ordinary forms of insanity.

The truly insane or highly neurotic parent tends to pass on (if anything) special forms of insanity, what I have called the habit insanities, folie circulaire, folie raisonnante, recurrent insanity, a tendency to break down at the epochs of life. These patients seem incapable of standing normal physiological stress. With this there is an extraordinary power of recovery so that patients belonging to highly neurotic stock may have dozens of attacks of most violent mania and yet retain till the end of a long life mental ability.

Strongly marked heredity is associated with the occurrence of the above disorders and with the various forms of hallucinational disorders, with organized delusional insanity, with ideas of persecution, and also with the various dreads or phobias and obsessions to which I have already referred.

CONCLUSIONS.

To sum up, heredity has a small share in the causation of general paralysis; it is more frequently seen in relationship with melancholic than maniacal states. This has some connexion with the longer life of persons nowadays. They not infrequently show the weight of years in mental depression. Melancholic states are much more likely to recur in families than maniacal disorders; all forms of insanity, especially sensory hallucinations and their resulting delusions with fixed obsessions, are chiefly dependent on hereditary taint; moral imbecility and

asocial and criminal tendencies often arise in very neurotic families.

Idiocy, mental weakness, and eccentricity is common in the children of physically decadent parents.

There is no such thing as transmission of any form of insanity direct, but there is a distinct danger of the passing on of a nervous instability which leads to mental disorder resulting from slight or even normal physiological strain.

Insane parents may have sane children.

Consanguinity alone does not produce mental disorder.

Eccentric and nervous (not insane) parents may give rise to whole families of idiots or defectives.

MEMORANDA: MEDICAL, SURGICAL, OBSTETRICAL.

THE DISTRIBUTION OF THE "AMERICAN" HOOK WORM.

UNTIL quite recently it was universally supposed that the *Necator americanus*, the causal agent in the production of an anaemia clinically indistinguishable from that due in Europe to the *Agchylostomum duodenale*, was a parasite peculiar to the New World, and on this account it became designated the "American" or "New World" hook worm.

In the summer of 1905, however, Looss was enabled, from a study of the parasites of pigmies from the Ituri Forest, to record the occurrence of this form in Central Africa, and he offered the interesting explanation that the *Necator americanus* was originally African and had been transported thence to America at the time of the slave trade. As most of the slaves imported into the United States were procured from the Guinea Coast, it was to be anticipated that, if the theory were correct, this species would probably be still obtainable in West Africa, and this I found to be the case while on the Gold Coast in the latter part of 1905.

On my return I continued my inquiries with a view to ascertaining the extent of the distribution of the *N. americanus* throughout the old world, and found that the specimens brought from Entebbe, Uganda, by the Sleeping Sickness Commission, and deposited in the Museum of the London School of Tropical Medicine, and those forwarded to me from North-West Rhodesia by Dr. Yule Massey, were wholly of this species. It is evident, then, that the *N. americanus* is widely spread over the African Continent, though it is, curiously, absent from Egypt.

Farther inquiry has shown it to be still more cosmopolitan in its distribution. Dr. Chalmers has kindly furnished me with a large number of "ankylostomes" from natives of Ceylon, and they likewise show no admixture with *Agchylostomum duodenale*. I have also been able, from an examination of material obtained from a patient who had returned to England after working for some years in the goldfields of Mysore, to verify its incidence in India. In a case from Burmah the infection was a mixed one. Stephens has already recorded necator forms from Assam and Burmah, but adds with reference to his material that "whether these species of necator include *N. americanus* remains to be seen."

In Chinamen I have so far only found examples of *Agchylostomum duodenale*. The absence, too, of any record from the active helminthological workers in Japan of its presence there is suggestive of a limitation in the range of *N. americanus* eastwards.

The local incidence of the two closely allied forms in various parts of the world remains still to be worked out, but it is at least obvious that the terms "american" and "new world" are in a sense misnomers as applied at the present day to the parasite under discussion, and that *N. americanus* is little if any less restricted than *Agchylostomum duodenale* in its distribution.

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SCURVY.

THE theory that want of fresh vegetable causes scurvy dies very hard. But I thought that the experience of the recent Arctic and Antarctic expeditions had proved that fresh meat is the essential need.