roundings, and yet they did not become tuberculous unless the tubercular matter was actually introduced into their systems.

In my next paper I shall discuss the question of bovine tuberculosis and spontaneous tuberculosis in other animals and birds; also cases where the liver and other organs of animals, birds, and snakes contained numbers of bacilli having the distinctive reaction of tubercle bacilli, but without the formation of tubercles.

AGORAPHOBIA AND ALLIED MORBID FEARS.

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A FEW months ago Dr. Garman, of Great Barr, asked me to take a patient of his into the Queen's Hospital for observation and treatment. I found that she was suffering from well-marked agoraphobia. This was the first case I had met with in a large clinic of nervous disorders during the past nine years. I therefore considered that it was sufficiently rare and interesting to form the basis of a paper upon this affection and other allied morbid states of mind.

On referring to the literature of the subject I found it very scanty. No mention is made of it in many of our chief text-books of medicine. Dr. Roberts has contributed a short article upon the subject to *Quain's Dictionary of Medicine*. Dr. Gowers, in his admirable work on *Diseases of the Nervous System*, makes no mention of agoraphobia or other morbid fears, and, in fact, scarcely notices neurasthenia itself. Raaney says nothing about it, though he writes fully on neurasthenia, as might be expected from an American author. M. Rosenthal, in his clinical treatise on *Diseases of the Nervous System*, mentions agoraphobia as one of the symptoms of chronic cerebral congestion, and states that he has seen two cases following mental overwork. He also states that it may occur during prolonged gastric disturbance. Dr. Grainger Stewart, in his clinical lecture on "Giddiness," briefly dwells upon the condition. He reminds us that Westphal, in 1872, gave a most careful clinical description of agoraphobia. In 1878 Legrand du Sault treated the subject in a masterly manner.

In the *British Medical Journal*, vol. i., 1879, is contained an abstract of a paper by Dr. Meschede, of Cassel, who described a form of mental affection the reverse of agoraphobia, namely, a dread of closed spaces and small rooms. This condition is called *clithrophobia* or *claustrophobia*, and is evidently closely allied to agoraphobia, the patient in both instances being unable to form an accurate conception of the dimensions

of his surroundings. In the *American Journal of Insanity*, vol. xlv., Dr. Andrea Verga describes his own case. He suffered from nropobin, or an intense dread of being in high places.

Dr. Ruggi, in the *Gazette des Hôpitaux*, 1878, described a mental affection in which the patient could not endure being within any enclosure, this being the antithesis of ngoraphobia, though closely allied to it in its nature.

In the *Lancet*, January 10, 1885, a surgeon relates the particulars of his own case. He suffered first from religious mania, brought on by overwork and anxiety. When he recovered from this, ngoraphobia supervened. He dreaded going out lest he should be taken ill.

Dr. Sutherland relates a case in the *Lancet* of January 17th, of the same year, and he claims that it is usually due to sexual or alcoholic excess.

Another case is related in the *Lancet* of April 25, 1885. I have looked through the whole of the volumes of *Brain*, hitherto published, and have failed to find any mention of the condition.

In the *Journal of Mental Science*, vol. xxxiii., is contained a translation of an article by P. J. Kovalevsky, Professor of Psychiatry and Neurology at Karcov, on "Folie du Doute, or the Delusion of Doubt." The article is very interesting, and the author discusses the relation of these morbid fears (pnthophobin) very fully. He describes neurasthenia as the soil from which grow up the degenerative psychoses or neuroses. The subjects of these fits of morbid fears are usually neurasthenics, the unstable condition of the nervous system being either inherited or acquired. It is well known that the children of neuropathic parents often inherit either decided organic modifications of the nervous system or a predisposition of the nervous system to psychosis or neurosis. In the first case idiocy, in the second neurasthenia, hysteria, and insanity appear. Beard calls neurasthenia the "American disease," but Dr. Kovalevsky states that it might more correctly be called the "Russian disease."

Neurasthenia is a very common disease. The majority of its victims may, under favorable conditions, pass through life without developing morbid fears or insanity, but some fail in the battle of life and develop serious affections.

The term ngoraphobia is derived from two Greek words, ἀγορά, a market-place, and φόβος, fear. It is certainly a very good name for the affection.

It must be remembered that agoraphobia, or a morbid dread of being in an open space, is not a disease, but a symptom only, and it is only one of a group of very numerous morbid fears that may supervene in neurasthenic people. These morbid fears are almost innumerable, and it is folly to attempt to name each particular fear, but such terms as agoraphobia and clithrophobia (dread of open and closed spaces) are certainly

worth retaining, for these are among the most important of such fears. An agoraphobic patient is completely incapacitated for any outdoor employment, and in an advanced stage is quite unable to leave his house.

The term mysophobia is applied to morbid fear of infection, astraphobia to a morbid dread of lightning. The whole condition might be termed pathophobia, the varieties scarcely necessitating a separate name.

With every discovery in science a morbid fear may be developed. For instance, a young woman was brought to me at the Queen's Hospital recently, by her mother, who told me that she had a dread of getting into a tram-car, fearing that she would die in it, and being seized with severe trembling and palpitation on merely seeing a car. This patient had been in an asylum some years previously.

Perhaps telephone fear also exists.

In all these cases of pathophobia there is an evident absurd disproportion between the cause and the amount of fear produced. The subjects of these morbid fears are fully aware of their absurdity, but cannot control themselves, and cannot be reasoned out of them; moreover, they act upon their fears. The young woman who dreaded a tram-car walked five miles to the hospital, while her mother travelled by the tram.

The subjects of these morbid fears are usually neurasthenic; in many cases this neurasthenia has been inherited, there being a history of epilepsy, insanity, nervousness, or some other neurosis in the family.

In rare cases no family history of neurosis can be obtained, and the neurasthenic condition has been brought on by overwork, worry, excessive lactation, frequent pregnancies, sexual excess, or other debilitating cause. Later on, morbid fears supervene upon the unstable condition of the nervous system, and finally, actual insanity may compel the friends to send the patient to an asylum. I have been struck with the marked potency of childbearing as a cause of agoraphobia and allied morbid fears. The patient whose case I relate later on attributes her illness to childbearing. In another case, also, the sister of a medical man was seized with intense agoraphobia after her first confinement. The affection lasted several months, but she recovered after living at Brighton for some time.

These morbid states are really conditions of partial emotional insanity, and in some cases end in well-marked insanity.

A patient who was under my care for acute hypochondriasis, and whose visits I dreaded from the long and detailed list of symptoms he would persist in writing down for me to read, each one of which I had to explain, and who would, on leaving me, return again after getting a few yards from my rooms with a fresh symptom, developed the dread of infection. He would wash his hands dozens of times in the day, and would not touch anything without washing directly after. Later on he had a dread of dirt, then became violent and dangerous. He was in an

asylum for a few months and was discharged cured. His sister was also in an asylum, and the family history of neurosis is well marked.

The morbid fear present may remain unchanged through life. It may disappear, to be followed by some fresh fear, or complete recovery may supervene. I have seen recovery supervene where the patient's circumstances have been greatly improved. There is no doubt that a want of success in life, entailing constant worry, is a powerful factor in the causation of mental diseases, especially in men.

The condition named "*folie du doute*," in which there is a marked enfeeblement of the will, may supervene in all cases of neurasthenia, either following a morbid fear or existing by itself, and without the appearance of pathophobia. Hammond relates an interesting case of "*folie du doute*." The patient, an intelligent gentleman, would spend an hour or two in determining whether he should take his coat or his shoes off first in undressing for bed. In the morning he would sit for half an hour with his stockings in his hands, unable to determine which should be put on first.

Minor degrees of this condition are frequently met with. After a heavy day's work, medical men will sometimes find themselves reading over their prescriptions two or three times, not feeling certain that they have ordered the correct doses. Similarly, business men will worry about their letters, being afraid that the wrong letters have been sent off.

To return to agoraphobia, one of the most important of the pathophobias. The essential condition of the affection is a morbid dread of an open space. The patient is quite well in his own house, but if he tries to cross the street, or to go into a field he is seized with an intense feeling of fright, and has to run to a wall, or fall down, being quite unable to proceed. Violent palpitation occurs, and a dreadful feeling of constriction is experienced over the heart. The legs feel weak and the knees give way, the patient staggers about, and all his limbs tremble. Numbness of the extremities also commonly occurs. There is no vertigo; as a rule, and no confusion of mind or loss of consciousness. Pallor of the face and profuse perspiration are usually present. The condition may supervene suddenly or gradually, and the patient is quite conscious of the foolishness of his fears, but unable to conquer them, the will power being in abeyance and quite subservient to the violent emotional disturbance. The special senses are usually unaffected. The patient is worse if the shops are shut when he goes out, and he finds relief from a trivial circumstance. He can walk behind a cart, or even if a child will walk by him. He can walk across a ploughed field, but not across a meadow. The symptoms rapidly subside as soon as the patient reaches his own house, but he will feel exhausted for some time after. In severe cases he is completely incapacitated and rendered a prisoner in his house. The condition may last a lifetime, or for months or years, and then dis-

appear, or definite symptoms of insanity may supervene. It is essentially neurotic, and not hysterical.

Neurasthenic patients are always shy and reserved. Their children are nervous; they suffer from a great liability to convulsions, terror, and nightmare, and are highly emotional. Such children have difficulty in getting through life successfully. Neurasthenic patients, in fact, are on the verge of insanity, yet proper treatment will, undoubtedly, in many cases save them.

A busy tradesman was brought to me two years ago, suffering from mental depression. His uncle had committed suicide and he himself had always been highly nervous. He told me that he was always contemplating suicide, and that he dared not be left alone. He had been sent to the seaside, but returned worse. I found that he lived at his place of business, that the rooms were very small and stuffy, and that he worked from twelve to sixteen hours a day. On my advice he lived out of town, riding to and fro on horseback, and diminished his hours of work to eight. In three months he was quite well, and has remained so since. He would most certainly have committed suicide or been in an asylum had he not changed his mode of living.

Considering the vast number of cases of neurasthenia that exist, and the dreadful sufferings entailed, it seems a pity that more attention is not given to the subject in this country. I have often found the rooms inhabited by patients suffering from melancholia and other morbid conditions of the brain to be small and dull.

There can be no doubt that gloomy surroundings and want of light and space at home are potent factors in the causation of mental diseases. I have at the present time three patients suffering from melancholia. One patient, a bachelor, has very small, uncomfortable rooms, without pictures or objects of interest in them, and I have no doubt that his disease was brought on mainly by the depressing effects of his surroundings. I have visited the homes of the other two patients and find them very gloomy.

In the treatment of agoraphobia and allied disorders, it is necessary to discover the cause of the exhaustion of the brain, and to remove it if possible. Nervine tonics, such as valerianate of zinc, the hypophosphites, iron, quinine, and phosphorus are useful. A residence at the seaside or in some elevated country district does good. A liberal dietary, and moderation in stimulants, tobacco, tea, and coffee are necessary. The patient, moreover, should be encouraged to discover some *maœuvre* by which the morbid fear may be overcome, but should not be forced to go into places that bring on the attacks.

The following is a brief account of my case:

M. H., a married woman, aged forty, was admitted into the Queen's Hospital on August 29th, complaining of an inability to walk in an open

space or in strange places, and also of depression of spirits. No history of nervous disease in the patient's family exists, as far as she knows. The patient has always been of a highly nervous temperament, but has never had an attack of the same kind before the present one. She has always had a good home and plenty of food. She has had nine children and one miscarriage. She suckled two of her children—one for twelve months, the other for a year and eight months. She attributes her illness to having so many children, and to over-suckling.

Nine years ago, while nursing a relative, and being in a very weak state of health, she was seized one day with a horrible dread and with shivering while going up stairs. A few months later, while walking out of doors, she had a fit of terrible fear and palpitation. Ever since she has been subject to these attacks. They begin suddenly and end suddenly, and are unattended with any confusion of mind or loss of consciousness. She cannot walk in an open space; she can walk out of her house for a few yards, and then is seized with an intense fear that she will never reach home again. She then turns and runs back, and can run better than she can walk, but cannot run in a straight line. If she carries a weight, such as two buckets of water, she can walk straight. She can also walk well in an entry and walks much better in a room where there are lines along the carpet, far better on a bare wooden floor, than where there is a plain carpet, for the lines assist her greatly. She can go across a ploughed field, but not across a meadow. A high wind will assist her. She never suffers from giddiness, but whenever she is seized with the fear she has violent palpitation.

While in the hospital it was found that she could not walk in a straight line even in the ward. She said that this was because it was a large room and strange to her, for she could get about her own house very well. On attempting to walk in the grounds of the hospital she could get along fairly well by the side of the wall, but if she got a yard or two from the wall she was very unsteady, and was seized with intense palpitation and fear. She was quite unable to walk straight out of the ward door and had to cling to the side and go by the wall. In returning to the ward she would quicken her pace and usually run in. A stick was a great help to her, but did not enable her to overcome her fear entirely.

Besides these attacks, which were invariably brought on when she tried to go out of doors, the patient was very nervous and subject to fits of depression and numbness in the hands and arms. The numbness would come on in bed, never in the daytime when she was up, and it never affected the legs. If strangers went into the ward, she said the bed seemed to sway, and she felt inclined to scream. She felt more comfortable with a screen near the bed. She also complained of shocks, and of going hot suddenly, and of throbbing all over her. The patient was somewhat anæmic and looked depressed. The thyroid gland was a little enlarged but soft; the pulse rate was accelerated during the attacks, averaging one hundred, but between the attacks it was normal. There was no loss of sensation anywhere, tactile, thermal, and painful impressions being normally perceived. The muscular sense was also normal. The pupils were equal, and responded normally to light and accommodation. The fundus oculi was healthy. The patient complained of seeing at times black spots and flashes of light before the eyes. There was slight deafness of nerve origin, but smell and taste were normal. The plantar, abdominal, and epigastric reflexes were present, the knee reflexes

were exaggerated, but there was no ankle clonus. There was no loss of power in the legs, the foot thrust being powerful, and no incoördination. Her memory for recent events was a little impaired, but the intellect was otherwise normal. The heart was a little enlarged and a soft systolic murmur was heard at the apex, but was not conducted into the axilla or elsewhere.

The patient had only been in the hospital about ten days when she insisted on going out, saying that she could not make herself comfortable in a strange place, and had never been able to do so since the commencement of her illness. During her stay in the hospital her temperature had been normal, and she had never had any hysterical seizures, or any of the ordinary symptoms of hysteria. She was decidedly of the neurotic and not of the hysteric type. Iron, salts, arsenic, and bromides were prescribed, but they did not in any way improve her condition.

I have lately received further information concerning this patient from Dr. Garman. He says that she is better, and had been to church since leaving the hospital, this being the first time for five years. She had recently been suffering from distressing irritability of the bladder, relieved by bromides. She had continued taking the iron and bromides, the prescription for which I gave her when she left the hospital.

The following case illustrates the opposite condition to agoraphobia, and is called claustrophobia, or a dread of shut spaces:

The patient, a lady about fifty-six years of age, suffers from attacks of fear and palpitation whenever she is shut in a railway carriage or a small room. She can travel by rail or go into a small room as long as the doors are not locked, and she has to bribe the guard to leave the door unlocked. I have observed her in two or three attacks. She cannot control them, and she suffers from intense fear and palpitation, with numbness of the hands and a sense of constriction in the wrists. These attacks occur if she goes out on a visit and has to occupy a small bedroom. She is better if she knows the door can be opened, and quite well in a large room. She is of a nervous temperament, has brought up a large family, and attributes her attacks to having had a large family, and to the worry incidental to the management of her grown-up sons. The attacks are purely mental, for she can be deceived into believing that the door of a carriage is unlocked, when the attack at once subsides.

Minor degrees of agoraphobia and allied fears are of common occurrence.

A young man, now under my care, suffering from dilated stomach with chronic spasm of the diaphragm and other muscles, cannot go into any place of public meeting, such as a church or theatre, without being obliged to leave. He feels choked, but has no fear, though he suffers from palpitation. This patient, getting into business troubles, became insane, and is now in an asylum.

Another patient dare not go to church, for, whenever he does, a feeling of nausea comes on and he is obliged to leave, or else he would vomit.

In both the above cases overwork and worry seem to have been the exciting causes. The sister of one of the patients suffered some years

ago from agoraphobia, from which she recovered after a few months' residence at the seaside.

The following are the conclusions I have arrived at from a study of many cases of mental derangement and morbid fears that have come under my notice:

That agoraphobia is a symptom only and not a disease in itself, its subjects being neurotic and often showing symptoms of nervous disturbance previous to its onset.

That it may be acute or chronic.

That it is the most important of the morbid fears, as it completely incapacitates its victims.

That any exhausting disease, habit, or occupation may be the exciting cause in people predisposed, such as neurotic subjects, or those suffering from neurasthenia, hereditary or acquired.

That the proper treatment is to discover and remove any faulty habit or depressing influence at work, and to prescribe a generous diet, cheerful society and surroundings, change of air, and nervine tonics, such as iron, strychnine, and arsenic with the bromides, the latter being prescribed with care and in small doses.

That attention should be paid to the dwelling-rooms, and that they should be as cheerful as possible.

That cases of neurasthenia should not be pooh-poohed, but should be carefully and systematically treated, as thereby much suffering and insanity may be prevented.

SHORTENING OF FEMUR FROM EPIPHYSIAL INFLAMMATION.

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THE study of the effect of local irritation or destruction of osseous tissue upon the subsequent growth of bone has, in late years, attracted much attention, and to Ollier, of Lyons, more than to any other surgeon, we are indebted for thorough experimental research and exact clinical data on this important subject.

Knowledge of this character is chiefly of prognostic value, and until these researches were available there was nothing of a positive nature upon which to base an opinion.

The great advantage of such exact pathological knowledge is appreciated when we undertake the study of an obscure bone case such as presented itself recently at the Orthopedic Clinic of Professor Willard,