

Clinical lectures on Graves' disease : delivered at the Hospital for Consumption and Diseases of the Chest, Brompton / by Hector W.G. Mackenzie.

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Clinical Lectures

ON

GRAVES' DISEASE.

Delivered at the Hospital for Consumption and Diseases of the Chest, Brompton,

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LECTURE I.

GENTLEMEN,—Several reasons determined the subject of these lectures. In the first place, I happen to have under my care at the present time a large number of cases of Graves' disease; secondly, I believe that a good many of its symptoms, recognised only of late years, are by no means so widely known as from their importance and frequency they merit; and thirdly, I feel sure that through a want of knowledge of these symptoms many cases of what is known as the incomplete type of the disease fail to be recognised. I propose in this first lecture to discuss in particular these less well known symptoms and to show you a series of cases mostly of the kind I have referred to; while in the second lecture I shall say something about the course and terminations, the pathology and treatment, illustrating my remarks by bringing forward cases of recovery and of long duration.

Nearly all writers who have reported cases of this disease have mentioned fright or other severe mental shock and over-fatigue as exciting causes of the malady. Gowers,¹ for instance, mentions that a number of cases occurred in Alsace and Lorraine after the Franco-German war. In my own cases I have noted the following among others as the events from which the patients dated their illnesses: a severe burn; being thrown out of a trap; an unusually long and difficult confinement; unexpectedly finding her father dead; having her house broken into by burglars; a drunken man falling in at the door unexpectedly; terror in a solitary house. I shall refer again to this matter of fright when touching on the pathology.

Quinsy and rheumatism are antecedent or coincident in a significant number of cases. Out of some forty cases I have noted quinsy in nine and acute rheumatism in five. This agrees with the experience of other observers. Thus, West² has recorded rheumatism in eight cases out of thirty-eight, and the occurrence of quinsy is mentioned in a good many published cases.

The association of the disease with other nervous disorders, such as epilepsy, hysteria, chorea, diabetes, and insanity, whether in the patient or in other members of the same family, has often been noticed.

The disease itself sometimes occurs in several members of the same family. I have four pairs of sisters under my care now, while sisters of two other patients have been affected. Two sisters, a cousin, and an aunt;³ a mother and three sisters;⁴ and three sisters;⁵—have been reported as all suffering from the malady. Oesterreicher's⁶ case, however, puts all these in the shade. A hysterical woman had ten children, eight of whom suffered from the disease; and one of the latter had four granddaughters also affected by it.

The proportion of men to women is very variously stated. Charcot,⁷ in a recent lecture, says the disease is only a little less frequent in men than in women. Eulenberg⁸ puts the proportion as one male to two females; Trousseau⁹ gives it as eight to forty-two; while Hardy¹⁰ says the disease attacks women almost exclusively. It is difficult to explain these differences. My own experience is that it is uncommon among men. Only three men, as against twenty women, have been admitted to St. Thomas's Hospital during the last twelve years. The only case in a male I am able to show you is one of recovery.

It is unnecessary for me to go over the old familiar ground and to describe to you the well-known triad of symptoms. Of the three, by far the most important and most constant is the palpitation; next in consequence comes the enlargement of the thyroid; while the exophthalmos, which is the most obvious, is the least essential. I shall show you cases where there has never been enlargement of the thyroid, or where the enlargement has disappeared, and also cases where the same may be said of exophthalmos. Palpitation, however, is not invariably experienced by the patient, and sometimes one finds a very rapid cardiac action without the patient being uncomfortably conscious of it. It is generally, however, the chief trouble they complain of, and in some cases is so conspicuous that they say their heart beats all over the body. I would remind you that the enlargement of the thyroid is nearly always more apparent on the right side than on the left. The thyroid is not an exactly symmetrical body; the right lobe, according to Quain¹¹ (and this I have verified for myself), is larger than the left, and hypertrophy must magnify the disparity.

I have said that of the three symptoms exophthalmos is the least constant. It was not mentioned in the three cases first described by Graves,¹² and I think, if present, he would have noticed it, for he immediately goes on to describe one in which it did exist. In three out of nine well-marked cases of the disease in the wards of St. Thomas's Hospital of recent years it has been absent. It is probably on account of the mistaken idea that exophthalmos is essential that so many incomplete cases, in which absence is the rule, are not recognised. When it does exist, exophthalmos is often not quite equal on the two sides, and several purely unilateral cases have been reported. Von Graefe's sign—the lagging behind of the upper lid when the patient looks down—is by no means constant, but is useful sometimes as a confirmatory symptom. In one of the cases I shall show you it will be seen to be well marked, although there is no exophthalmos. The same may be said of Stellwag's sign—the retraction of the upper lid. Time prevents me from dwelling on these so-called cardinal symptoms, which to many minds still constitute the whole of the disease. Let me remind you now of what Trousseau has said of their absence. "I believe," he says, "that the disease may be foreseen, and does really exist in a great number of instances without there being exophthalmos, bronchocele, or extreme frequency of the pulse." The additional symptoms the disease has been found to possess have made it much easier to recognise these incomplete forms, in which it frequently exists.

First and foremost among these new symptoms is trembling. The failure until a few years ago to recognise this really cardinal symptom is one of the most curious instances of intellectual blindness. If a patient the subject of this disease hold out his hands, a tremor in them is very perceptible, consisting of vibratory movements of small amplitude, and with a period of about one-eighth or one-ninth of a second. It is exactly the same tremor which is noticed when the muscles are over-fatigued. The tremor is a communicated one, affecting not the fingers individually, but the whole extremity, and sometimes the whole body, so that it may be observed in the lower extremity as well as in the upper. It usually affects both sides of the body; but in some cases it is limited to, or is very much more marked in, one extremity. Besides this tremor, which is more or less insensible, the patients generally suffer from attacks of trembling, either with or without palpitation, which attacks bear the same relation to the tremor that the palpitation does to the rapid cardiac action. The tremor is generally more obvious when the patient is flurried, and sometimes may be noticed only under such conditions. It is much more perceptible when the patient is sitting up than when lying down. It, as a rule, only interferes with the more delicate movements of the hand, such as writing or sewing, such an operation as carrying a cup to the lips being performed perfectly steadily. I have found this symptom a most valuable assistance to diagnosis, and it has generally first attracted my attention to the nature of the malady in the absence of exophthalmos. I have not yet met with a case in which it has been altogether absent. Thanks to Marie¹³ and Charcot,¹⁴ this symptom seems pretty well known in France, but as yet the same cannot be said of this country. Lately a case of Graves' disease was shown at a provincial medical society and the

¹ Diseases of Nervous System, vol. ii. ² Oph. Soc. Trans., 1886.³ Cheadle: St. George's Hospital Reports, 1872-74.⁴ Wild: Brit. Med. Jour., vol. i. 1886.⁵ Hale White: Brit. Med. Jour., vol. ii. 1886.⁶ See Dejerine, Thèse d'Aggrégation, 1886.⁷ Gazette des Hôpitaux, 1885. ⁸ Ziemssen's Cyclopaedia.⁹ Clinical Lectures, vol. i. ¹⁰ Gazette des Hôpitaux, 1883.¹¹ Anatomy, vol. ii.¹² Thèse de Paris, 1883.¹³ Clinical Lectures.¹⁴ Loc. cit.

tremors which were noticed were attributed to alcoholism. At the discussion at the Ophthalmological Society in 1886, the only allusion made to it was Dr. West's mention of trembling in two cases. Madison Taylor¹⁵ on the other side of the Atlantic, recently says he has rarely seen this muscular tremor. It is mentioned in no text-book that I know of, with the exception of Gowers'. It was impossible, however, that a symptom such as this could have altogether escaped notice, although not recognised as a cardinal part of the disease. Trousseau remarks of one of his patients that on account of trembling she was unable to sign her daughter's marriage contract. Charcot mentioned it in 1856 in the earliest recorded case in France. I have met with a few other allusions to trembling in cases reported¹⁶ before 1882, and I was much interested to find in the records of St. Thomas's ten or more years ago that trembling had been noted in several cases.

Two of my patients having complained to me of painful cramps, I was led to inquire as to whether they occurred in my other cases, with the result that I found they were very frequent. Of fifteen patients of whom I inquired, thirteen said they were subject to these cramps, and another who did not own to having cramps had had attacks in which the hands became rigid and the thumbs were turned inwards. In some cases the hands only are attacked, but more frequently the feet and legs are affected. The cramps generally come on at night in bed. One of my patients, who has been ill twenty years, is subject to cramps, and has also had attacks of more persistent spasm of the hands resembling tetany.

Another trouble these patients have is a tendency of the legs to give way at the knees, so that they with difficulty avoid falling. I have noted this in twelve of my cases. This giving way of the legs is well known as occurring in myxœdema, and it is interesting to notice that tremors and contractures have also been noted in the subjects of the latter disease and in animals which have had the thyroid gland extirpated. A decided feebleness in the lower extremities, almost amounting to paraplegia, was observed by Warburton Begbie¹⁷ in two or three aggravated cases of the disease. Ballet¹⁸ has observed hemiplegia and paraplegia, but thinks these arose from coincident neurosis. Dr. Bristowe's¹⁹ patient Marion had hemiplegia, hemianæsthesia, and contracture of the paralysed arm. A patient of Dr. Murchison, who died at St. Thomas's in 1876, had hemiplegia supposed to be hysterical.

Occasionally some weakness of the ocular muscles exists. Slight ptosis of both eyelids was noted by West in one case. I have seen weakness of the external recti producing double vision on looking to the extreme right or left. Complete ophthalmoplegia externa existed in the case of Marion, and Ballet²⁰ has recorded an exactly parallel case.

Slight elevations of temperature have been noted by numerous observers since Trousseau's time. Lately Bertoye,²¹ writing on this point, says that fever arises suddenly and from insignificant causes, that it is unstable and of variable intensity, and that its appearance is generally of bad augury. A recent English writer²² says elevation of temperature is a constant symptom, but this is not my experience. The temperature has generally been taken morning and evening in the cases we have had at St. Thomas's, and seldom has there been any rise. In a case which proved fatal the temperature was taken every four hours, and was invariably subnormal. I have taken the temperatures of my out-patients from time to time without finding any higher temperature than 99.4° in the mouth. On the other hand, in the case of Marion, the temperature was that of fever during all the time she was under observation—a period extending to many years. A subjective feeling of heat is certainly not uncommon, and I have noted this in thirteen of my cases. It is most troublesome at night when the patient is in bed. With this there is intolerance of heat and great tolerance of cold. Patients generally say they feel best in cold weather, and cannot endure hot. The myxœdematous patient, on the other hand, is very intolerant of cold. Flushing of the head and neck is very common. You will probably notice in several of the

patients I shall show you how the face and neck become scarlet as soon as observation is directed to them. This, however, occurs not only under observation, but at other times the patient's face and neck become burning hot. I have noted it in nineteen of my cases.

Sweating is also frequent, and is sometimes excessive. I have noticed that the hands are generally cold and clammy. In one of my patients the sweating of the hands was a source of great annoyance, as interfering with her work.

Perhaps the most interesting affections of the skin are the pigmentary changes. Begbie²³ a good many years ago alluded to the bronzing of the face of one of his patients, and Trousseau remarked of one of his cases that the skin, formerly transparent, had become brown and freckled. General bronzing of the skin was noticed in a fatal case in St. Thomas's in 1880. At the Ophthalmological Society, West and Carrington²⁴ each brought forward a similar case. Other observations of this condition have from time to time been published, but the most interesting are the cases, six in number, recently published by Drummond.²⁵ I am inclined to believe with Drummond that this pigmentation of the skin is not uncommon. Five of my patients exhibit it, and in these there is a remarkable agreement with the cases I have referred to. The parts generally affected have been the face, the neck, the sides of the chest, the abdomen, the lumbar region, the axillæ, and the flexures of the arms and thighs. The colour of these parts has been of a more or less dark brown, contrasting strongly with the normal colour of the skin as shown on the front of the chest. Irregular patches of deep pigment on the face, such as in the illustration accompanying Drummond's paper, I have not met with except limited to the eyelids; nor have I seen leucoderma, the existence of which Reynaud²⁶ found in five cases, and of which examples have been published by Lucy²⁷ and others in this country. A greasy condition of the skin similar to that noticed in general paralytics I have observed sometimes.

The nutrition of the hair seems generally affected. Most of my patients say their hair has become very thin and comes out very much, and its scantiness and dryness have been very conspicuous in many of them. On account of this several have had it cut quite short. Falling out of the hairs of the eyebrows and eyelids was recorded in a case by Burney Yeo,²⁸ while Barnes²⁹ reports one in which the hair fell out nearly universally.

Edema of the subcutaneous cellular tissue, generally limited to the lower extremities, is said by Millard³⁰ to be of frequent occurrence. Several of my patients have mentioned that their legs swell towards evening; but in only two cases have I seen edema without there being some well-known cause to explain it. In a significant proportion I have found varicose veins in the lower extremities. Edema of the eyelids has also been noticed. Gowers mentions its presence after recovery. In three of my cases of old standing it is present, and in two other cases at St. Thomas's I have seen it.

A great diminution in the electrical resistance of the body has been demonstrated by Vigouroux³¹ and Charcot,³² who think that this symptom may prove useful in the diagnosis of incomplete forms of the disease. This is a point of much interest, and I hope to be able on a subsequent occasion to have more to say on the subject, but as yet I have made no clinical observations with regard to it. For an account of it let me refer you to a recent paper by Wolfenden in vol. xxxix. of the *Practitioner*.

Considerable emphasis used to be laid on the presence of anæmia, which Begbie³³ considered to be the *fons et origo* of the disease. Very many patients, however, are not at all anæmic, although some, especially the younger, are so to a certain degree, and I have one or two patients at present in whom the anæmia is the most obvious symptom. Wilks³⁴ has cautioned us to guard against mistaking cases of Graves' disease for ordinary anæmia, as in the former no improvement results from treatment generally beneficial in the latter.

Epistaxis, I might here mention, is not a very infrequent

¹⁵ Phil. Med. and Surg. Rep., 1888.
¹⁶ Morell Mackenzie: Trans. Clin. Soc., vol. i. Reynaud: Arch. Gén. de Méd., 1875, vol. i. Russell: Med. Times and Gaz., 1876.
¹⁷ New Syd. Soc., 1882. ¹⁸ Rev. de Méd., 1883.
¹⁹ Diseases of Nervous System. ²⁰ Rev. de Méd., 1888.
²¹ Thèse de Lyon, 1888. ²² Wolfenden: Journal of Laryngology, 1888.

²³ Contr. to Pract. Med., 1862. ²⁴ Trans., loc. cit.
²⁵ Brit. Med. Jour., vol. i. 1887. ²⁶ Arch. Gén. de Méd., loc. cit.
²⁷ Brit. Med. Jour., vol. ii. 1887.
²⁸ Ibid., vol. i. 1877. ²⁹ Ibid., vol. i. 1889.
³⁰ Thèse de Paris, 1888.
³¹ Le Progrès Méd., 1887, p. 316. ³² Gaz. des Hôpitaux, 1889.
³³ Op. cit. ³⁴ Guy's Hospital Reports, 1870.

occurrence. Trousseau and Cheadle³⁵ give characteristic examples. I would specially call your attention to the occurrence of this symptom at the onset of the disease, as in a patient of Warburton Begbie.³⁶ Marion, to whom I have so often referred, had frequent hæmorrhages from the nose, ears, and mouth. In seven of my patients there is a history of epistaxis, and in a recent case at St. Thomas's there were two attacks. One or two of these patients have complained of a full stopped-up feeling in the nose lasting for months and one on this account has been under treatment at a special hospital. The occurrence of pulmonary, intestinal, meningeal, and cerebral hæmorrhages is mentioned by Trousseau.

General emaciation, as attending severe cases, has been pointed out by nearly every writer. It has been noticed in nearly all such cases which have been in the wards of St. Thomas's. Sometimes it is extreme. Even patients only slightly affected remark that they are losing flesh. You will notice it in all the more serious cases I show you. Emaciation is generally a sign that the disease is active; when extreme it is of bad augury, but still it does not prevent hope of recovery.

The mental condition of the patient is generally, although not always, as profoundly altered as her bodily state. She exhibits an irritability, excitability, and fidgetiness foreign to her nature, which sometimes she is as ready to recognise and own to as she is uncomfortably conscious of its existence. She is frequently low-spirited and lachrymose. She is so nervous that she starts at any unusual sound, and is profoundly affected by good or evil tidings. A knock at the door or the arrival of a telegram may be sufficient to upset her for hours. A girl I recently saw was put into a state of great alarm at the sight of the cardiograph. Not infrequently such patients are suspicious; often they are discontented. The experience of their nurses is that they are particularly trying to their patience and temper. They are the embodiment of what Scott has said of women generally—"uncertain, hard to please, and variable." The sleep is generally disturbed. The patient is restless, and is apt to wake up in a fright. Sometimes she walks in her sleep, sometimes she wakes and finds she has jumped out of bed. The moral nature is sometimes perverted, the patient being spiteful, untruthful, and intolerant of contradiction. In not a few cases the mind is more profoundly affected and the patient becomes quite insane. Melancholia and mania are the usual types. The peculiarity of her appearance, Savage³⁷ suggests, may give origin to an idea that she is being watched, and form a starting-point for the former type of insanity.

The remaining features of the disease I can only allude to very briefly. The respiratory troubles are nervous cough and paroxysms of dyspnoea attended with aggravation of all the symptoms, blueness of the face, swelling of the vessels of the neck, and immediate asphyxia. Such attacks³⁸ have at times proved fatal. It is probable that, like similar attacks which come on in the course of a thoracic aneurysm in the vicinity of the larger air tubes, they are due directly to pressure on the trachea. The affections of the digestive system appear to be of nervous origin. The appetite is capricious, sometimes it is ravenous, sometimes it is altogether lost, as, according to Ferrier,³⁹ happens in monkeys after removal of the occipital lobes. Vomiting, unrelated to the ingestion of food, and diarrhoea are not infrequent, the latter, perhaps, being the more common. In eight of my cases there has been a relaxed condition of the bowels. Intermittent albuminuria, generally considerable and sometimes excessive, was remarked by Warburton Begbie⁴⁰ in several cases of this disease. Ballet⁴¹ and West have met with similar cases. The coincidence of glycosuria has been recorded by many observers.⁴² Polyuria has also been noted. In none of my own cases, however, have I found anything unusual in regard to the urine. Irregular menstruation, amenorrhoea, and menorrhagia are extremely common, although in a few cases the function is normal.

I must now very shortly touch on the different forms which the disease may assume. In a perfectly typical case, all four leading symptoms, with a greater or smaller number of the others, will be present. The absence of goitre or

exophthalmos makes the disease a little less complete, while the presence of only two out of the four is the typical incomplete form. The mode of development of the symptoms throws light on these incomplete forms. In some cases, all four, with other troubles, appear more or less simultaneously. More commonly one or two develop first, and the disease may never go any further. Thus tremor and palpitation, with secondary symptoms in many cases, form the first stage of the disease, exophthalmos or goitre, or both, following at intervals. If the latter do not develop, then the case remains an incomplete one. In five of my complete cases the exophthalmos was noticed for a year or more before any other trouble. I have seen at least two cases where goitre had existed for several years before the other symptoms developed; and West mentions a similar case where enlargement of the thyroid was noticed at fourteen, palpitation at eighteen, and exophthalmos at twenty-two years of age. I have a patient at the present time who has had a goitre of the parenchymatous variety for six years, in whom persistent frequency of the pulse makes me suspect the advent of Graves' disease.⁴³ In many cases the patient has been unconscious of the enlargement of the thyroid until it has been pointed out to her, and accordingly it is difficult to say when it commenced. The incomplete forms of the disease which the physician is likely to see are those in which the palpitation and trembling are the combination, while the oculist is most likely to be consulted for such forms as commence with the eyes.

The cases which I now propose to show will illustrate the various symptoms and the different types of the disease. At the present time I have over thirty patients attending here and at the Royal Free Hospital who are suffering from Graves' disease. Of these, six are complete and typical cases presenting all four chief and many of the secondary symptoms, in eight more the only absent symptom is exophthalmos, in five others the absent symptom is the goitre, while in the remainder—the typical incomplete cases—both goitre and exophthalmos are absent. I shall reserve till next lecture, when I shall be discussing the course and prognosis of the disease, the more chronic of these cases, and shall now show you some typical specimens of each variety.

The first case I have to show is one in which all the symptoms are present; but when the patient first came to the hospital, over twelve months ago, they were all slight. After attending two months she had become such a typically incomplete case that she left off attending, thinking herself cured. The second case is one which, while complete, has some of the symptoms so slightly marked that they might easily be overlooked; and the third case has just missed being complete.

CASE 1. *Palpitation, trembling, giving way of legs, cramps, irritability, bronzing of skin, &c.; exophthalmos; enlargement of thyroid; improvement under treatment; subsequent recrudescence.*—Julia P., servant, unmarried, aged twenty-three, came to the Brompton Hospital on April 18th, 1889, on account of shortness of breath and palpitation on hurrying for the previous three months. There was noticeable prominence of the eyes, the heart's action was rapid and irregular, and the thyroid was distinctly enlarged, especially its isthmus and right lobe. Before coming to the hospital she consulted with a friend about the swelling of the throat, and was comforted with the assurance that "the bass voice was coming." There were characteristic fine tremors of the hands when held out, and her legs trembled both when standing and stooping. Increased irritability and irregular menstruation were the chief of her other troubles. The only points of interest in her history were the occurrence of a fit two years previously, accompanied by bleeding from the nose and an attack of rheumatism one year ago. Her brother had suffered from fits, and her sister from quinsies. I treated her with ten minims of tincture of belladonna and five grains of citrate of iron and ammonia three times a day. On May 2nd she told me her legs gave way under her, and she fell down. This happened again a week later. The tremors in the hands persisted. On June 13th I could make out no perceptible enlargement of the thyroid. She ceased attending after July 25th, being then better in every respect, and considering herself cured. I heard from her again in the beginning of November, 1889. She then wrote: "I am not getting on so well as I ought. My eyes are

³⁵ Op. cit. ³⁶ Op. cit.

³⁷ Guy's Hospital Reports, 1875.

³⁸ Shingleton Smith: Med. Times and Gaz., vol. I. 1878; Bristowe: Op. cit.

³⁹ Functions of Brain.

⁴⁰ Op. cit. ⁴¹ Rev. de Méd., 1883.

⁴² Brunton: St. Bart's Hosp. Rep., 1874. Wbks: THE LANCET, vol. I. 1875. O'Neill: Ibid., vol. I. 1878. Ballet: Op. cit.

⁴³ I may now add that since this was written my suspicion has been confirmed by further observation of the patient. The patient has emaciated very much, typical tremors have developed, she has become extremely irritable, and she has many of the minor symptoms.

getting very bad again, and my throat also. Very much given to trembling." She is now again attending the hospital, and her condition presents features of great interest. The trembling and palpitation quite unfit her for work. The tremors are, as before, very marked in the hands. The thyroid is considerably enlarged, and the eyes are quite as prominent as when she first attended. There is no von Graefe's sign. There is still a tendency for the legs to give way. She is very subject to painful cramps in the legs, and is very intolerant of heat, from which she suffers much more than from cold. She does not sweat much, but is liable to flushings. The legs swell at night, but this may result from the varicose veins which she has. Her face and neck are noticeably of a dark-brown colour, and there are some even darker patches on the neck. The colour is a great contrast to that of the chest. The abdomen and the lower part of the back, the axillæ, and the folds of the arms, are also coloured a dark brown. The patient herself noticed this darkening of her skin, and told her mother of it, although she did not think it worth while mentioning to me until I made remarks about the colour of the face. Her hair is thin and comes out "in handfuls." She suffers from cough, which she attributes to the uncomfortable feeling due to the goitre. She has a large appetite, and becomes inconveniently hungry half an hour after a meal. She frequently has sickness and diarrhoea. She is not anæmic, but is losing flesh and looks thinner than when she last attended. The catamenia are now regular, but scanty. She is still irritable, and her spirits are variable. She sleeps fairly soundly, but frequently wakes up with a start.

CASE 2. Graves' disease; very slight exophthalmos and thyroid enlargement.—This patient, Mrs. P—, aged thirty-five, first attended on Nov. 11th, 1889, complaining of trembling, palpitation, an altered appearance of the eyes, and irritability of temper for the previous six or eight months. The trembling had been experienced for two years, but had been much worse since the other symptoms came on. Her hands trembled characteristically when they were extended, and at times shook so much that it was impossible to write or work. The eyes were only slightly prominent, but there was a distinct von Graefe's sign and some retraction of the upper lid. Palpitation did not occur so frequently as trembling, and the pulse-rate when I took it was only a little over 90. The thyroid was slightly enlarged. She described herself as being "shockingly irritable and low-spirited," and formerly was quite the reverse. She had no patience with her children. Her sleep was generally disturbed. She frequently had cramps in the hands. She had flushings and clammy perspirations of the hands and feet, and was very intolerant of heat, which she "couldn't stand at all." The hair had come out very much. The appetite was poor, the bowels variable, and the catamenia irregular. Two years ago she received a severe shock at finding her child, as she thought, dead in her arms, and during the "Ripper" scare had another great fright. Six or eight months before I saw her she had epistaxis.

CASE 3. Palpitation, trembling, cramps, giving way of legs, slight proptosis, von Graefe's sign, &c.; doubtful thyroid enlargement.—The patient, Mrs. N—, aged forty, first came to the hospital on April 1st, 1889. She complained of very troublesome palpitation for the previous two or three years, and of trembling, especially when flurried, for six or seven months. In the hands, especially in the left, there were very marked tremors. In the eyes, although no perceptible proptosis existed, a little lagging of the upper lid could be seen. She had felt a feeling of fulness in the thyroid region, but no enlargement could be detected. She attended for three months, with benefit. A few weeks ago she returned, saying the palpitation and trembling were bad. The hands, as before, tremble when extended. The eyes are now slightly prominent, and exhibit distinctly von Graefe's sign, and the uncomfortable fulness without palpable thyroid enlargement still exists. She has hot flushes and painful cramps in the feet and legs, which sometimes give way unexpectedly. She has irregular menstruation, disturbed sleep, and extreme nervousness.

In the next five cases there has never been any exophthalmos, and in all the thyroid enlargement is slight. The first of this series is not here. I wrote for her to attend the lecture, but have been informed by her sister that she is having fits, and is so excitable that a knock at the door is sufficient to send her off.

CASE 4. Trembling, palpitation, flushing, perspirations, irritability, and menorrhagia; no enlargement of thyroid until six months under observation.—Mrs. F—, aged twenty-nine, came on May 9th, 1889, complaining of trembling, palpitation, loss of flesh, flushings, and menorrhagia. The cardiac action was rapid, but there were then no typical tremors, no enlargement of thyroid, no exophthalmos, and no abnormal physical signs in the chest. She had rheumatic fever at the age of eleven. She attended two months, and improved under belladonna and tonics. In October she returned, complaining of the same symptoms as before, and also of a fulness in the thyroid region, which made her collar feel tight and uncomfortable. Examination showed the thyroid to be slightly enlarged. There were now most distinct tremors when the hands were extended. She was low-spirited and irritable.

CASE 5. Palpitation, trembling, flushing, perspirations, emaciation, &c.; slight thyroid enlargement.—Emily B—, aged twenty-seven, single, came to the hospital on Nov. 4th, 1889, complaining of cough and pains in the shoulders and chest. She had suffered from palpitation since childhood, and from attacks of trembling, faintings, flushings, perspirations, and disturbed sleep for twelve months. Her hands shook so that she could hardly hold anything, and the legs also trembled and were inclined to give way. These trembling attacks came on at no particular time. At times she felt as if she had no strength to speak or move. She had lost flesh and had occasional diarrhoea. On examination there was found slight thyroid enlargement and very rapid cardiac action. She had felt some fulness in the neck, causing uncomfortable tightness of her collar. There were no characteristic tremors of the hands when I examined her. The only illnesses from which she had suffered were bad sore-throats.

CASE 6. Trembling, palpitation, flushing, heat, emaciation; enlargement of thyroid; symptoms six years' duration, dating from fright; sister with Graves' disease.—Annie S—, aged twenty, first came to the Brompton Hospital on Nov. 18th, 1889, complaining of shortness of breath. She said the least thing made her tremble, and when flurried, which was very frequently, her heart beat very fast. On examination I found a moderate degree of enlargement of the thyroid, which she said was very variable, her neck appearing to her much fuller sometimes than others. Her neck measurement was 14½ in. Sometimes she had a feeling there as if she would choke. Beyond rapid cardiac action there were no abnormal signs in the chest and there was no exophthalmos. The trembling was very troublesome to her. Her legs trembled as well as her arms, and were apt to give way. Cramps had been very bad years ago, but were not so now. She said she felt very hot at night, and was subject to flushing heats, but not to sweating. The legs swelled towards evening. Her hair was thin and had come out very much. Her teeth also were decayed. She had had slight epistaxis several times, and she complained of a stopped-up feeling of the nose, sometimes lasting three months at a time. She was formerly troubled with vomiting, but not with diarrhoea. She had lost flesh very much, 21 lb. in the last eighteen months. The catamenia were irregular. Her temper was irritable. She frequently woke up with a start at night. All her symptoms dated from a fright at the age of fourteen. Her father died suddenly, and she was the first to discover him, which gave her a very great shock. She frequently suffered from quinsy. One sister had had rheumatism. Another whom I have seen had Graves' disease in a slight and incomplete form, and attended Dr. Green as an out-patient last year.

CASE 7. Palpitation, trembling, anæmia, and emaciation; slight thyroid enlargement; fright at onset.—Sarah J—, aged twenty-three, came on Nov. 18th, 1889, complaining of shortness of breath. She trembled very much at times, and had palpitation badly. She had lost flesh considerably, and her hair had been coming out in handfuls. She suffered from sweating, from a feeling of heat at night, and from cramps in the legs. She was anæmic, and the cardiac action was rapid. There was a fulness in the thyroid region, which seemed to have been greater twelve months previously, her neck then measuring 14 in. in circumference as against 13 in. now. There was no exophthalmos and no abnormal signs in the chest. The catamenia were regular, but insufficient. She suffered from irritability. Her present trouble she dated from the time she was thrown out of a trap two years before.

CASE 8. Palpitation, trembling, enlarged thyroid, &c.; sister

with Graves' disease.—Mrs. S—, aged thirty-nine, came on Nov. 18th, 1889, complaining of palpitation for seven or eight years, which had been worse during the previous twelve months, during which time trembling also had been "dreadful." The thyroid was moderately enlarged, especially the right lobe. The tremors were typical, but there was no exophthalmos, and the cardiac action was between 80 and 90. She was intolerant of heat, and felt specially hot at night, when she frequently woke up in a fright. A sister, who suffered from palpitation and goitre, died suddenly when supposed to be in her usual health.

The next case is another in which exophthalmos was absent, and it is interesting on account of the absence also at first of palpitation.

CASE 9. *Trembling, with enlargement of thyroid; no palpitation until six months after first observation.*—Ellen C—, aged twenty, housemaid, came on May 23rd, 1889, complaining that her throat was painful, and was swollen both inside and outside. The thyroid was enlarged as usual, more perceptibly so on the right side, and was said to be larger sometimes than others. Trembling was frequent, and there were marked tremors in the right hand when held out, but palpitation was never experienced. She has continued to attend until the present time, and has been treated with belladonna. The thyroid is still enlarged, and of late there has been palpitation. She has trembling attacks every day at some time or another, and hot flushes, but no perspirations. There is no exophthalmos, and no irregularity of bowels or catamenia. I may add that she had enlarged tonsils, which were removed in January.

Cases 10, 11, and 12 are examples of the form without enlargement of the thyroid. In the first exophthalmos has existed, but has now disappeared; in the other two it is still present.

CASE 10. *Palpitation, trembling, flushings, and perspirations; formerly exophthalmos; symptoms date from severe burn.*—Frances K—, aged twenty-one, attended on May 13th, 1889, for shortness of breath, palpitation, extreme nervousness, and trembling. Her hands were clammy and moist, and trembled distinctly when held out. She had flushings of heat, and complained of a "dreadful" feeling of heat and painful cramps at night. Her legs frequently gave way under her, and became slightly oedematous towards evening. Appetite good, but bowels always relaxed. Catamenia regular. No marked anaemia. Heart action rapid, first sound accentuated, but no murmur. The thyroid could be felt, but did not appear enlarged; very often had a feeling of fulness there. All these symptoms the patient dated from a severe burn two years previously. She has had epistaxis both before and since the burn. I was observing that there was no prominence of the eyes, when the patient interrupted me to say that when she was ill with the burn it was generally remarked that her eyes were starting out of her head, and her doctor frequently spoke about them. This prominence gradually subsided, but even now when she is frightened she says it reappears. I treated her with iron and tonics, but I had to give up the iron on account of diarrhoea coming on. She attended two months, with benefit on the whole. She returned lately, and I am now treating her with iron and belladonna.

CASE 11.—*Palpitation, trembling, cramps, flushing, giving way of legs, and emaciation; eyes lustrous and prominent; history of fright.*—Emily C—, aged thirty-seven, single, came on May 9th, 1889, complaining of palpitation and trembling. She had suffered from palpitation for five or six years, and from trembling for many years, but the latter had been very much worse lately, so that now she could not hold a thing steady. She generally had two or three attacks of trembling a day, affecting the whole of the body and accompanied by palpitation. The least thing, she said, set her off—going into chapel, for instance, invariably bringing on an attack. She was subject to flushing very much, her face becoming scarlet, and her cheeks burning without any apparent cause. The hands were always cold and clammy, the legs were very apt to give way under her, and the feet were attacked with cramps. She had lost flesh very much. Her eyes were prominent, but there was no retraction of the upper lid and no von Graefe's sign. There was no enlargement of the thyroid. The cardiac action was rapid. There were fine tremors in the hands when held out. There was a history of fright seven years previously, a drunken man knocking at the door one night and falling in when it was opened to him. There was no history of rheumatism. The patient's

mother was said to be very nervous. She has continued attending up to the present time, taking till recently cod-liver oil and bismuth. Her present condition is no different from that when she first attended. She has lately been having belladonna, and feels better while taking it.

CASE 12. *Trembling, cramps, giving way of legs, palpitation, emaciation, falling out of hair, sweats, flushings, and depression of spirits; exophthalmos, but no enlargement of thyroid.*—Mrs. G—, aged thirty-two, first attended the Royal Free Hospital in October, 1889, on account of palpitation. Two years before this she had a good deal of worry and trouble which distressed her very much. She then began to suffer from palpitation and breathlessness. Her eyes, always rather prominent, became more so. She felt some fulness at times in the situation of the thyroid. Six months before being seen she noticed that her right hand and arm were constantly trembling, and later the left became similarly affected. Sometimes trembling occurred from head to foot. She had been losing flesh and getting weaker for two years. She had felt low-spirited and lachrymose. The only particulars of interest in her history are that she had rheumatism slightly at the age of seventeen, and that there is a strong family history of phthisis. Her condition was as follows:—Slight exophthalmos, with slight von Graefe's sign. No goitre. Nothing amiss with the heart. Pulse from 88 to 102. Typical tremors in right hand when extended. She flushed easily if unexpectedly spoken to or looked at, and had a constant feeling of heat in the top of the head. She perspired very much, especially on the chest and head, the sweat falling off her in large drops. One leg sometimes gave way, and she had to take hold of some support. She suffered very much from cramps, especially in the left leg. Her hair, formerly very thick, was thin, and was still coming out very much.

Cases 13, 14, and 15 are examples of the most incomplete type, where neither exophthalmos nor enlargement of the thyroid has developed.

CASE 13. *Palpitation, tremors, flushing, giving way of legs, and cramps; symptoms dating from severe fright.*—Mrs. H—, age forty, first attended on April 29th, 1889, for attacks of fainting and shortness of breath. She had very marked tremors in the hands, and her pulse rate was 136. She had suffered from palpitation for four years. Attacks of trembling, she said, were a source of great trouble to her. She had also "dreadful cramps" in the limbs. There was no exophthalmos and no goitre. She was subject to very severe flushings and hot burning heats, especially about the face. Her hair had come out very much. At times her legs would give way under her, and she had the sensation as if all the strength had gone out of them. She had had several attacks of rheumatic fever—at the ages of twelve, twenty-two, and thirty-seven. The cardiac impulse was external to the nipple, but there was no murmur. At the present time the tremors are still very marked, and the palpitation and trembling troublesome. She suffers from depression of spirits and cries all day long. The catamenia, formerly irregular, are now normal. All her symptoms she dates from a very severe fright she received four or five years ago, when burglars broke into the house in which she was living. Before that she never at any time suffered from trembling or palpitation.

CASE 14. *Palpitation, trembling, cramps, giving way of legs, edema of eyelids, and pigmentation of face.*—Caroline W—, aged sixty, first attended under me at the Royal Free Hospital on April 29th, 1889. She came complaining of palpitation and trembling, from which she had suffered for several years, particularly since the death of her son three years previously. She had attacks of general trembling of the head and limbs so bad that she was unable to thread a needle, and writing was almost impossible. Her legs trembled when walking, and she was inclined to stagger when she first started. She also had painful cramps in the hands and giving way of the legs. The cardiac action was rapid (108) and occasionally intermittent. The impulse was most apparent in the fifth space an inch and a half outside the nipple. No murmur. With the exception of a few rhonchi, there were no signs of disease of the lungs. There was no prominence of the eyes and no enlargement of the thyroid. No albumen in the urine. The patient said she had suffered from severe headache since childhood, but otherwise she had been quite healthy. The only interesting points in the family history were that a sister had died in a lunatic asylum, and that her mother had suffered from heart disease. The patient attended for a

few months, and was treated with tonics and belladonna, and she improved to a certain extent. She returned again in November, and I made the following further notes about her condition:—Complexion muddy, and skin of face and neck rather greasy and brown, being specially pigmented about the eyes. Some oedema of both lower eyelids. Palpitation and trembling still very troublesome. Cardiac action 96. Hands tremble when held out; tremors coarse and irregular. No perspirations. No exophthalmos or enlargement of the thyroid.

CASE 15. *Palpitation, trembling, cramps, flushings, and sweats*—Ruth L—, aged thirty, single, cook, came on Sept. 30th, 1889, suffering from palpitation, attacks of trembling, and pain at the chest. There were well-marked tremors of the hands when extended. She was subject to cramps in the legs. The cardiac action was rapid. The pulse was taken frequently, and varied between 92 and 120. There was no exophthalmos, and no thyroid enlargement. The hair was thin, and was coming out very much. She was subject to flushing, heats, and sweating. She said she had never been well since she was ten years old, but her present trouble had existed for about twelve months. The catamenia were irregular. She was irritable. Her legs swelled towards evening. Eight years ago she had been very much frightened by a strange man running after her.

"THE LIVING EARTH."

ABSTRACT OF ADDRESS TO SECTION I. OF THE SANITARY CONGRESS HELD AT BRIGHTON.

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SANITATION in large cities is, at the best, a makeshift, and no high level of health is attainable in a place where the chief object of hygienists seems to be to enable persons to live as densely packed as possible. This prelude is necessary, because the remarks which I am about to make are addressed mainly to persons who live in the country, and who enjoy the luxury of elbow-room, and I trust that what I am about to say will make them hesitate before they hastily copy the sanitary methods of the town, and heedlessly begin to foster overcrowding, the bane of all sanitary and social virtue.

It has long been recognised by agriculturists that the upper stratum of the soil differs from that immediately below it in fertility; and in treatises on gardening (notably in that admirable work written by William Cobbett nearly seventy years since) the warning is invariably given to be careful, in trenching, not to bury the top spit of soil beneath the lower spit, because the top spit is by far the most fertile. The fertility in this case was supposed to be due to prolonged exposure to air, and the lower stratum of soil, if brought to the surface, would only become fertile after a considerable interval. It is interesting to observe that, although these early writers were unacquainted with the whole truth, they had grasped the most important fact, and their practice was sound. This is often the case, and I feel sure that we act rashly when we hastily abandon the custom of centuries because some new fact dazzles us and distorts our vision. The black vegetable mould which lies upon the surface of the earth is largely composed of organic matter, which is not to be wondered at, seeing that every organised thing, whether animal or vegetable, which inhabits this globe falls when dead upon the earth, and becomes incorporated with it. This black vegetable mould is largely composed of excrement, for not only is the excrement of the larger animals being constantly added to it, but this and the varied organic debris which compose it pass repeatedly, probably, through the bodies of animals which inhabit the earth, and especially of earthworms. Darwin, in his book on "Vegetable Mould and Earthworms," has forcibly drawn attention to the enormous amount of work which worms perform in the aggregate: how they disintegrate the soil; how they riddle it with burrows, which admit air to the deeper recesses of the soil; how their castings, which are incessantly being thrown off, tend to level inequalities, and

gradually to bury stones or whatever dead inorganic matter is incapable of solution, digestion, or disintegration. Earthworms are found almost everywhere, and they are probably the most important of the animals which live in the soil, but I need scarcely say that there are many others, and everyone who has a garden must recognise the fact that gardening is only carried out at an enormous sacrifice to animal life, for with every thrust of the spade into rich garden mould a deathblow is dealt to many of its inhabitants. The disintegration and aeration of the soil, which is effected by the quiet tillage of the earth-dwellers, is of the greatest importance to the agriculturist, for it is hardly conceivable that the delicate rootlets of plants could grow and extend unless the soil had been softened and pounded by the digestive fluids and the gizzards of the earthworms and their neighbours. Although the amount of animal life in the earth is considerable, it is nothing compared with the richness of the soil in the lower forms of vegetable life. The dead and excremental matter becomes the food of saprophytic fungi, which abound in the soil to a very great extent. This must be the case, for we know that saprophytes and their allies abound everywhere, and, as the surface of the earth is the common reservoir of all forms of life, it follows that these low vegetable microbes must be more abundant in the earth than elsewhere, and more abundant at the surface than deeper down.

In Watson Cheyne's editions of Flüge's work on Micro-organisms¹ this is clearly stated: "Enormous numbers of bacteria have always been found in the soil by the most various observers. Infusions made from manured field and garden earth, even though diluted 100 times, still contain thousands of bacteria in every drop, and the ordinary soil of streets and courts also shows the presence of large numbers. Bacilli are present in much the largest numbers; but in the most superficial layers and in moist ground there are also numerous forms of micrococci." These micro-organisms of the soil are very active in producing changes in organic matter added to the soil. These changes are usually in the direction of oxidation; occasionally the change is one of reduction. One thing is certain, that if the soil be sterilised by heat or other means, it is no longer capable of producing any chemical change in organic matter. This seems to me to be a fact of prime importance to the sanitarian. The oxidation and nitrification of organic matter in the soil is a biological question, pure and simple. It is an effect produced by the *living earth*; a process analogous to fermentation, which Cobbett seems to have appreciated. Whether the nitrifying process which takes place in the soil is due to one or to many varieties of microbe is doubtful, but the latter supposition is probably correct, and experiments seem rather to point to the conclusion that, given favourable conditions—the free admission of air to a soil which is not unduly moistened—nitrification will go on. It has been conclusively shown by Flüge, Koch, and others that the microbes are most abundant in the superficial layers of the soil, and that they tend to disappear in the deeper layers. They are practically absent in the deeper layers, unless the earth has been deeply stirred or trenched, or unless sewer or cesspool has conducted filth to the deeper layers without touching the superficial ones. "Numerous filtration experiments, on a large and small scale, have shown most distinctly that a layer of earth, half to one metre in thickness, is an excellent filter for bacteria, and hence the purification of fluids from bacteria must be still more complete in cultivated, and especially in clay soil, and where the fluid moves with extreme slowness. Further, it has been repeatedly shown that wells which are well protected against contamination with bacteria from the surface and from the sides of the well furnish a water almost entirely free from bacteria; that, further, wells of water containing bacteria become the purer the more water is pumped out, and the more ground water comes in from the deeper layers of the soil." The vegetable living mould on the surface of the earth is in, short, a filter of the most perfect kind. It is very rich in saprophytic bacteria, whereas the subsoil at a depth varying from three to six feet is barren of bacteria, as well as of other kinds of life. The subsoil is mineral, inorganic, and dead; the mould upon the surface is organic, and teems with life. Anything which is thrown upon the surface of the ground soon disappears. This is especially

¹ New Sydenham Society, 1890.

brevity and clearness. Among his larger works may be named that on "Fecundity, Fertility, and Sterility," a work of enormous difficulty, but treated with a grasp that never wavers, and which at once took its place as a standard work on the subject; his Gullstonian lectures on "Sterility," a further treatment of part of the same subject; his researches into puerperal mortality, for the determination of which he pursued all the mothers of Edinburgh and Glasgow for weeks and months during removals and disappearances, until he ascertained their ultimate fate. The result of this great work (the tables for the preparation of which he lately presented to the Obstetrical Society's Library) was to show that the mortality of childbirth was much larger than had been imagined. This work is now twenty years old, and, though we may reasonably believe that antiseptics have considerably lowered the mortality, these are still the only available statistics. Into two volumes—"Researches in Obstetrics and the Mechanism of Natural and Morbid Parturition"—he collected a large number of the smaller and highly important papers read mostly at the Edinburgh Obstetrical Society. The ripest fruits of his work are to be found in his Clinical Lectures, written without reference to books, but almost exhaustive of the medical side of diseases of women, both as to range of subjects and as to their treatment. A whole treatise in these admirable lectures is often contained in a short sentence, and no better or healthier work for the student and practitioner exists. The characters of his work are enormous erudition, great sense of proportion, and love of truth for its own sake. It is remarkable that a man holding the leading position in practice as an obstetric physician in the greatest city in the world should have had the time and the energy to produce work of this kind to the very end; and his example should be remembered.

In the midst of his great practice Dr. Duncan was often wearied, but never hurried; always ready to attend to the needs and questions and perplexities of those who sought him. His influence on original work in London has been great. Much of the best work in his department was suggested by him to others; very much owed its fertility to his great knowledge of his subject which enabled him to point out what was known, and what needed further work. If it be true, as has sometimes been said, that a great man proves his greatness as much by what he inspires and vivifies in others as by what he does himself, the title to greatness clearly belongs to him on this ground. In this capacity—that of the encourager and stimulator of work of the best kind—he will be sadly missed. May we hope that, in the language of the Georgics slightly altered from the original, "*Pullulet ab radice ista densissima sylva.*" His feelings and methods in his department were distinctly medical, and he persistently and rightly set his face against the idea that all pelvic diseases required an operation. But surgical proceedings, even of the boldest kind, excited his warm interest if he thought that they were likely to prove of ultimate benefit. His position with regard to them was characteristically judicial: restless surgeons were not, he thought, to be too easily condemned; they did what they did at their own risk, indeed, and their own responsibility; but if they proved their position and justified their boldness by their results, he freely expressed his wonder and admiration, and regarded them as *franc-tireurs*, who might advance practice by their restless experiments. This was a different thing, in his opinion, from wanton recklessness, for which he had no patience.

It is astonishing how few things a man, who thought and spoke as strongly as he did, had to retract, and how this habit of suspending judgment till proof was forthcoming may be read in his works dealing with vexed and doubtful questions. His instincts, however, which were seldom wrong, led him to speak with great plainness of some departments of practice, such as that of the treatment of minor displacements, even before figures were forthcoming for him who ran to read. His life may be said to have been purely that of a student and practitioner. He had no hobbies; reading was his recreation even in his holidays. He read everything, remembered all he read, and could quote place and reference with the greatest ease. It was this which, among other things, enabled him to do the immense amount of work which he did. It was not necessary for him to read up a subject; it was there ready in his memory, thought over, digested, and ready for the occasion, only waiting a suitable case to call his energies forth to

the supplying of a vacant place or correcting an erroneous idea.

His style was characteristic: strong and rugged, aiming at clearness rather than elegance, at accuracy rather than effect. This was like the appearance of the man himself. His presence and talk were like the bleak honesty of his native moors. As a physician, patients were sometimes disconcerted by these very qualities, which they did not expect to find in a "ladies' doctor"; but none in trouble failed to find a kind and sympathetic heart beneath his somewhat silent and sententious manner, and he was ever ready to help both with advice and money in time of need. With frivolity and charlatany he had no patience, and such as possessed these faults found they had met in him with the wrong man. In his relations with patients and his fellow practitioners self-interest never came in. The interests of the patient were paramount.

In appearance Dr. Duncan was of middle height, powerfully built, with an upright, firm carriage. His head was massive; his face was generally impassive, but capable of great expression. His eyes were clear and reflected his moods. His voice, tinged with the accent of his birth-place, was grave and manly. His manner in lecturing was slow, direct, and impressive, and his hearers felt that he was filled with the importance of the subject. He lived in his family, had no clubs, many friends, few great friends, but to such what a great friend he was.

For many years past it was his habit to rent, during the months of August and September, a large house, usually in a picturesque part of his beloved Scotland, and there, surrounded by his large family, he and his bright and charming wife exercised a gracious and unostentatious hospitality. Relieved for a time from the cares of practice, he brimmed over with joke and story, or uttered shrewd comments on men and affairs, with suggestive talk based on his wide experience of life and a well-stocked memory.

By Dr. Duncan's death the department of obstetric medicine has suffered an irreparable loss in this country, and letters and telegrams received by his family from all classes of society testify to the effect which it has produced and the feeling of personal bereavement it has occasioned. In the words of the highest lady in the land, expressed in a deeply-sympathetic telegram to Mrs. Duncan, "the country and Europe at large have lost one of their most distinguished men, and one who will be sorely missed."

As might naturally be expected, Dr. Duncan was the recipient of many honours. The Universities of Edinburgh and Cambridge conferred upon him the degree of LL.D., the University of Dublin made him an honorary M.D., and the King and Queen's College of Physicians an honorary Fellow; he was also a Fellow both of the Royal Society and the Royal College of Physicians of London; he was nominated by the Crown as a member of the General Medical Council. He held the office of Examiner in Midwifery in succession to the Universities of London, Cambridge, and Oxford, and was an honorary member of the principal medical societies both at home and in America, Russia, Austria, Germany, and Norway.

Dr. Duncan married in 1860 Miss Jane Hart Hotchkiss, a lady belonging to an English family settled in Dumfriesshire. He had in all thirteen children, nine of whom survive him.

The following account of his case has been given us by Dr. Aldren Turner of London, who was in attendance during the latter part of his illness in association with Dr. W. H. Gilbert of Baden-Baden. Dr. Matthews Duncan had been for some months in failing health, having suffered much from eczema of a gouty nature. In the early spring he had felt weak, but notwithstanding he commenced in May his usual summer course of lectures. He was unable, however, to undergo the strain, both of teaching and practice, and about the middle of June he discontinued his lectures. For some time past he had been under the care of Dr. Andrew, as he had been suffering from attacks resembling angina pectoris, and it was deemed advisable that he should seek relief at one of the German watering-places. Towards the end of July, accompanied by his wife and some of his family, he started for the Continent, and halted for a short time at Blankenberghe, in Belgium. Here the anginous attacks were frequent, but did not last long, nor were they very severe. After a journey which must have severely strained his already weak heart-muscle, he arrived at Baden-Baden on Aug. 7th. The attacks continued slight, but he was able to take a little exercise and

enjoyed the baths. After a week, indeed, his symptoms so much improved that he rejoiced in not having had an attack for twenty-four hours. On Sunday, Aug. 17th, he had a very severe seizure, being in extreme agony and danger for several hours. There was great difficulty in breathing, his pulse was feeble and flickering, and his whole cutaneous surface was bedewed with a cold perspiration. These severe attacks were repeated on the two following days, and on Aug. 20th his condition was such as to cause great anxiety. The first sound of the heart was feeble, and the pulse was rapid and intermittent; the respirations were hurried, and were associated with oedema of both bases, cutaneous oedema over the ankles, sacrum, and chest, and the urine contained a small quantity of albumen. There was great prostration, combined with a distressing restlessness and inability to sleep. Suitable treatment was adopted, and towards the end of the week his condition had very much improved. There had been no return of the severe paroxysms, although the slighter forms still persisted. The heart had recovered its tone to some extent, and his appetite was good. During the next week convalescence proceeded apace, so much so that Dr. Muirhead of Edinburgh, who came over from Wiesbaden to see him, recommended that he might be taken back to London during the following week. Every preparation for the journey had accordingly been made, when, on Monday, Sept. 1st, as he was sitting quietly in bed towards the late afternoon, a loud snoring respiration was suddenly heard, and his death was instantaneous.

He was buried in the cemetery at Finchley on Sept. 8th. The Queen commanded Dr. Quain to represent her at the funeral. Sir Henry Acland, Sir Risdon Bennett, Sir Henry Pitman, Dr. Broadbent, and many other Fellows and Members of the College of Physicians, were present; whilst St. Bartholomew's Hospital was represented by the treasurer, Sir William Savory, Dr. Andrews, Mr. Thomas Smith, and most of the other members of the staff, together with sisters and nurses. The Obstetrical Society was represented by Dr. John Williams and Dr. Champneys. Sir William Turner, Dr. Littlejohn, and Dr. Muirhead of Edinburgh were there, and Professor Ogston and other friends from Aberdeen. Numerous relatives and private friends were also present.

MR. THOMAS PRINCE, M.R.C.S.

THIS gentleman, formerly of Balsham, Cambridgeshire, but more recently of Dorking, died at his residence in the latter town on Aug. 20th, in his eighty-first year, sincerely and affectionately regretted by all who knew him. Mr. Prince, who was born at Balsham in 1809, belonged to a medical family of some generations' standing, being son of the late John Prince, a doctor of the same place, and grandson of Thomas Prince, a well-known practitioner for many years in Cambridge. He studied his profession under Abernethy and Sir Wm. Lawrence at St. Bartholomew's as early as 1826, and afterwards practised at Balsham for nearly half a century. Retiring from practice on the death of his wife in 1878, he resided from 1880 at Dorking. His eldest son, who also followed the traditions of the family by becoming a member of the medical profession, died before him in 1884.

Mr. Prince was a man of striking presence and strong personality, with a most winning charm and geniality of manner. His ability as a general practitioner was so fully recognised that his advice was sought far beyond the limits of his own neighbourhood. Strong, vigorous, and manly, he was more hale and active in his eightieth year than many men of middle age. A well-spent life preserved his robust faculties intact to the last, and his simplicity of life and habits recalled to the end the best and happiest traditions of the beginning of the century. The profession has lost in him a hardworking, industrious, and enlightened member, and his family and friends an exceptionally lovable and beautiful character.

JAMES LAING, M.D. ABERD.

PERTSHIRE has just lost an able and accomplished practitioner in Dr. James Laing, who died at Bridge of Earn on the morning of the 1st inst. Dr. Laing studied at Edinburgh University and at the Royal College of Surgeons of that city, taking his diploma of Licentiate in Surgery in 1839. In the following year he became assistant to his uncle, Dr. Chalmers, who had practised in the Bridge of Earn district for wellnigh half a century. The *clientèle*

was extended by Dr. Laing, and he became the family physician to the houses of Kinnoull, Moncreiffe, and Kilgraston, a connexion he retained for many years. In addition to his wide general practice he held the appointment of medical officer to the parishes of Rhynd, Forgandenny, and Dron, but was chiefly engaged as consultant at Pitkeathly Wells, Bridge of Earn, where his caution and skill and pleasant manner contributed greatly to the attractiveness of the place for invalids, many of whom, after benefiting by his advice, remained his staunch friends.

In 1852 Dr. Laing received the diploma of M.D. from Marischal College, Aberdeen. By this time he had risen to be one of the most respected and popular practitioners in the north, and exerted his influence with all classes for the common good, particularly for the welfare, moral and physical, of the poor. Bridge of Earn owes much to him, not in medical practice only, and will long cherish his memory with gratitude for the cordial self-sacrifice with which he threw himself into every project for the good of the district and its people. For ten years his eldest son, Dr. Henry Laing, acted as his assistant, a post to which his youngest son, Dr. James Begbie Laing, succeeded.

Medical News.

NEW METROPOLITAN PARKS.—Under the statute which has just become law important powers are conferred upon the London County Council in respect to public parks and recreation grounds under their control. Provision is also made for the erection by the Council of mortuaries for unidentified bodies, and powers are given as to artisans' tenements, new building regulations, and water-supply within their authority.

ST. JOHN AMBULANCE ASSOCIATION.—Mr. W. G. H. Duncan has been appointed honorary secretary to the Ceylon Centre of this Association; and Surgeon Lees Hall, A.M.S., in view of the services he has rendered to the movement, has been asked to allow his name to be brought before H.R.H. the Grand Prior and the Chapter-general for selection, in order that it may be submitted to Her Majesty for approval, with a view of his being enrolled as an honorary associate of that order.

IRVINE AND THE NOTIFICATION ACT.—The Notification of Diseases Act having come into operation this month at Irvine, Dr. Wilson, burgh medical officer, in accordance with intimation on Saturday evening last, ordered the removal to the hospital of a girl eleven years of age, who was suffering from fever in the house of her father, a labourer. The sanitary inspector, accompanied by a hospital attendant, went to the house in the ambulance waggon to remove the patient, but the parents stoutly resisted the attempt. All the efforts of the authorities failed to effect the removal of the child, and the men were compelled to retire without accomplishing their object. A sheriff's warrant for removal may require to be obtained. The episode caused much excitement in the neighbourhood.

SANITARY INSPECTORS' CONFERENCE AT YARMOUTH. The annual summer meeting of this Association was held on Saturday, the 6th inst., at Yarmouth. The members were cordially received by the Mayor, who expressed his pleasure in receiving so important a deputation. Mr. Alexander Hugh, Chairman of the Council, thanked the Mayor on behalf of the Association, and proceeded to recount the objects of the body. Dr. Bately read some Historical Notes on Sanitation in Yarmouth, and pointed out that where Yarmouth now stands the waves of the Ocean had rolled for ages. After detailing in an interesting manner the early condition of the town, he said, on Oct. 6th, 1598, an Act was passed ordaining "that the alderman and every ward should appoint a scavenger for weekly cleansing the gutters, drains, &c., and each alderman, with three or four of the chief housekeepers to assess the ward with a weekly rate to defray the expense, and if any refuse payment the constable to seize their goods and sell them. The alderman to appoint carters for carrying away the muck, and any refusing to cart it to be imprisoned." He gave an account of the present sanitary arrangements which have done so much to make Yarmouth one of the healthiest towns in England. It was added that the system of using sea water for flushing purposes has also been adopted at Bournemouth.

OUTBREAK OF TYPHUS IN GERMANY.—It is reported that typhus fever has broken out in the district of Rybuik, Upper Silesia, and twenty persons are suffering from the malady on the large estate of Modlisszevko, in the province of Posen.

HOSPITAL SATURDAY AT BRIGHTON.—The result of the collection in aid of the medical charities was submitted at a crowded meeting held at the Pavilion, when the Mayor (Alderman Mainwaring) presided. The Mayor expressed his satisfaction with the result of the day's work, and referred to the total amount which had been received up to the period of the meeting as £1016 4s. 3d. Several returns had not been received, but he thought that the meeting had cause to be satisfied with the result of their endeavours. About 380 ladies had been engaged in collecting that amount, and the Mayor had estimated that the weight of the copper coins received amounted to about a quarter of a ton.

SHEFFIELD GENERAL INFIRMARY.—At the annual meeting of the governors of this institution the secretary announced that the expenditure of the past twelve months had exceeded the income by £1547 15s. 3d., attributable mainly to sanitary alterations and the renewal of 106 worn-out bedsteads. The board had to deplore the death of Dr. Bartolomé, who had been connected for forty-three years with the infirmary. Mr. John Marshall, the chairman, moved the adoption of the report, and, after alluding to the various losses the hospital had sustained in the deaths of many of its active supporters, expressed a hope that the general public would continue to give their support to the institution.

LEAD POISONING IN THE WEST RIDING.—The town clerk of Bradford (Mr. McGowen), in reply to a complaint by Mr. Forsyth, the medical officer of Drighlington, takes objection to the statement that lead arises from the use of the Bradford water, and attributes the condition to the want of proper care on the part of the consumers, and possibly from the board not sufficiently flushing the mains. Dr. Hector (Drighlington) quotes eighty-six cases of lead poisoning in persons living at some distance from the main road, and supplied by a considerable length of service pipe. He advocated absolute abstention from the Bradford water and the substitution of well or spring water.

DEATH UNDER CHLOROFORM.—On Saturday last Mr. Wynne Baxter held an inquest at the London Hospital concerning the death of a man aged fifty-one, who was admitted into the institution suffering from abscess of the thigh and an affection of the spine. On Aug. 23rd an operation became necessary, and was quite successful, chloroform having been administered. On the 3rd inst. it became necessary to probe the abscess, for which chloroform was again given; but, according to the report before us, death ensued before the patient was fully anaesthetised. Mr. Andrew Smith, the house surgeon, stated that at the necropsy the heart was found healthy, though poorly nourished; whilst the lungs were not in the least affected. The jury returned a verdict of "Accidental death."

ACCUMULATING FUNDS.—An arrangement has just been made by the Treasury with the Bank of England which will greatly facilitate the accumulation of small trust funds. Heretofore it has been a great inconvenience to trustees who are charged to allow small funds to grow by accumulation of interest during the minority of infant beneficiaries, for example, to have to draw and reinvest the dividends amounting to no more than a few pounds at a time. This duty will henceforth be undertaken by the Bank of England at a cost for brokerage of one penny in the pound, and the holder of stock who desires to reinvest his income as it comes due will be able to give a general instruction to the Bank, which will ensure the automatic carrying out of his desires without further interference on his part. The intervention of the Bank is limited to funds not exceeding £1000 in amount, so that the new rule will not constitute any appreciable invasion upon the stockbroker's province, but it will greatly simplify and facilitate in these small transactions the process, at present disproportionately troublesome, of accumulating a small fund the subject matter of reversionary interests.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on September 9th, 1890.

Hospital.	Beds occupied.					Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Euteric fever.	Other diseases.	
Eastern Hospital	270	42	..	55	3	370
North-Western Hospital ..	293	31	..	19	1	344
Western	124	8	..	10	1	143
South-Western	160	..	..	..	..	160
South-Eastern	222*	21	1	32	2	278
Northern	414	20	..	..	..	434
Totals	1483	122	1	116	7	1729

SMALL-POX.—Atlas hospital ship, 1.

* 1 infant with mother.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

- CARRINGTON, GEORGE HEDWIG, M.R.C.S., L.S.A., has been appointed Medical Officer for the Fylingdales District of the Whitby Union.
- COCHRANE, JOHN, L.R.C.P., L.R.C.S. Edin., has been appointed Certifying Factory Surgeon for Kirkcovan District, Wigtownshire.
- CUNNINGHAM, C. L., M.R.C.S., L.S.A., L.M., has been appointed Port Medical Sanitary Officer to Newhaven, vice Dr. Fussell, resigned.
- GOODWYN, ALFRED HUNTER, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glas., has been appointed Medical Officer for the Droxford District and Workhouse, Droxford Union.
- HARRELIAM, ERNEST THOMAS, L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer at the Infirmary, Wandsworth and Clapham Union.
- HENDRICKS, CECIL MORGAN, M.B. Durh., M.R.C.S., has been appointed Medical Officer for the Stoke Newington District of the Bicester Union.
- HENRY, JOSEPH, L.R.C.P. Lond., L.R.C.S. Irel., has been appointed Certifying Officer for the Vaccination Districts of Wellington, Featherstonhaugh, Greytown, Masterton, Castlepoint, Carterton, and Otaki, New Zealand, vice Johnston, resigned.
- HICKS, J. ABERNETHY, jun., L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed Third Assistant Medical Officer to the Whittingham County Asylum, Preston, Lancashire.
- HOLDEN, GEO. HERBERT ROSE, M.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Surgical Officer to the General Hospital, Birmingham, vice Geo. Heaton, M.A., M.B. Oxon., &c., resigned.
- HUMBLE, GEORGE A., M.D., M.R.C.P. Lond., has been appointed Consulting Physician to the General Hospital of the Rio Negro, Patagonia, Argentine Republic, South America.
- JOHNSON, SAMUEL EBENEZER, L.R.C.S. Edin., L.S.A., has been re-appointed Medical Officer for the Balsall-heath and Moseley Districts of the King's Norton Union.
- LAKE, W. W., M.R.C.S., L.S.A., has been appointed Medical Officer for the Seventh District of the Depwade Union, vice G. B. Masson, resigned.
- LARKIN, FREDERIC CHARLES, M.R.C.S., L.S.A., has been appointed Honorary Surgeon to the Stanley Hospital, Liverpool, vice J. K. Smith.
- MACKENZIE, WILLIAM, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glas., has been appointed Medical Officer for the C District of the Thrapstone Union, vice J. Crew.
- MURPHY, W. E. C., M.B., B.Ch. Univ. Dub., has been appointed Medical Officer of Health to the Urban Sanitary Districts of Llanfrehfa Upper and Llanvihangel-Llantarnam.
- NOWLAN, F. B., B.A., M.B., B.Sc. Surg., B.A.O. Univ. Dub., has been appointed Medical Officer of Balbriggan Dispensary District, Medical Officer of Health, Certifying Factory Surgeon, and Medical Attendant to Constabulary and Coastguards, vice Dr. E. W. Adrien, deceased.
- RATTRAY, ALEXANDER, M.D., L.R.C.S. Edin., L.S.A., has been appointed Medical Officer for the Blankney District of the Sleaford Union, vice M. Thompson, resigned.
- ROBERTS, EDWARD, M.R.C.S., has been appointed Assistant Surgeon to the Royal Eye Hospital, Manchester.
- ROWBOTHAM, ARTHUR JOSEPH, M.R.C.S., has been appointed Medical Officer for the Newton-on-Trent District of the Gainsborough Union; also Medical Officer for the Clifton District of the Newark Union, vice E. A. Phillips, resigned.
- SUFFERN, A. C., M.D., M.Ch., has been appointed Medical Superintendent of the Rubery Hill Asylum, vice Thomas Lyle, resigned.
- TAYLOR, GEORGE HENRY, L.R.C.P., L.R.C.S. Edin., has been appointed Visiting Surgeon and Dispenser to the Trial Bay Prison, New South Wales.
- WINSHIP, WM. ALGERNON, M.R.C.S., L.S.A., has been appointed Medical Officer for the Alwinton and Elsdon Districts of the Rothbury Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

- ANDERSON'S COLLEGE, Glasgow.—The Governors invite candidates for the Chair of Physiology vacant by the resignation of Professor Christie.
- BARNET.—Medical Officer of Health. Salary £406 per annum (to cover and include travelling expenses). No private practice will be permitted.
- BETHLEHEM HOSPITAL.—Two Clinical Assistants for six months. Apartments, rations, and attendance.
- BIRMINGHAM GENERAL HOSPITAL.—Assistant House Surgeon for six months. Board, lodging, and washing.
- BOLTON INFIRMARY.—Junior House Surgeon. Salary £100 per annum.
- CLAYTON HOSPITAL, Wakefield.—House Surgeon; salary £200 per annum, with board, lodging, and washing. Also Junior House Surgeon, registered and unmarried; £25 per annum with board, lodging, and washing.
- FLINTSHIRE DISPENSARY.—House Surgeon. Salary £100 per annum, with furnished house, coal, and lighting. Welshman.
- HANTS COUNTY HOSPITAL.—House Surgeon. £100 per annum, with board, lodging, and washing.
- HOSPITAL FOR WOMEN.—Two Clinical Assistants. Open to students after their fourth year.
- HUDDESFIELD INFIRMARY.—Junior House Surgeon. Salary £40 per annum, with board, lodging, and washing.
- HULL ROYAL INFIRMARY.—Junior Assistant House Surgeon. Salary £50 per annum, with board and lodging.
- LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon for six months. Board and lodging.
- NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Assistant Physician.
- ROYAL FREE HOSPITAL, Gray's-inn-road.—Junior Resident Medical Officer for six months. Board and residence in the Hospital.
- ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES, Henrietta-street, Covent-garden.—House Surgeon for six months. Honorarium 25 guineas, with board, lodging, and washing.
- WEST BROMWICH HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.
- WORCESTER COUNTY LUNATIC ASYLUM.—A Third Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

- CARTER.—On Sept. 1st, at Albany-road, Bexhill-on-Sea, the wife of Albert Carter, M.D., of a daughter.
- COCKELL.—On Sept. 2nd, at Forest-road, Dalston, the wife of Fredk. E. Cockell, jun., M.R.C.S., of a daughter.
- COOPER-KEY.—On Sept. 9th, at Wilton-place, Belgrave-square, the wife of Dr. A. Cooper-Key, M.R.C.P., of a son.
- DEIGHTON.—On Sept. 9th, at St. Bernard's, Hills-road, Cambridge, the wife of Frederick Deighton, M.B., of a daughter.
- KIDD.—On Sept. 1st, at Merrion-square, Dublin, the wife of George H. Kidd, Esq., M.D., F.R.C.S.I., of a daughter.
- THOMAS.—On Aug. 29th, at Roslyn, Camborne, Cornwall, the wife of J. Telfer Thomas, L.R.C.P., M.R.C.S., of a daughter.

MARRIAGES.

- CHALLIS—TIBBEY.—On Sept. 8th, at Christ Church, Marylebone, Harry Thornton Challis, M.R.C.S. & L.R.C.P., only son of H. J. Challis, of Trinity-square, E.C., and Hackney, to Emma Augusta, only daughter of Geo. Tibbey, of Maryborough, Queensland, Australia.
- PALMER—WILD.—On Sept. 1st, at the Parish Church of St. Marylebone, by the Rev. E. Raven Hollings, John Irwin, of 47, Queen Anne-street, Cavendish-square, eldest son of the late John Palmer, of Eliot-place, Blackheath, to Alice Scott, only daughter of the late Charles Wild, of Suffolk Lodge, Hampton Wick.
- POCOCK—GEORGE.—On Sept. 3rd, at St. Andrew's Church, Kirton-in-Lindsey, Alfred George Clark Pocock, M.R.C.S., youngest son of William Pocock, M.D., of Streatham, to Helen George, second daughter of C. F. George, M.R.C.S., of Kirton-in-Lindsey, Lincolnshire.

DEATHS.

- BLACKMORE.—On Sept. 4th, at Byrom House, Quay-street, Manchester, Alfred Blackmore, M.R.C.S.
- BROWNE.—On Aug. 26th, at Strandtown, Belfast, Samuel Browne, M.K.Q.C.P. Irel., M.R.C.S., aged 81.
- CHALMERS.—On Sept. 4th, at Pollok-street, Glasgow, Robert Chalmers, L.F.P.S. Glas., L.S.A., aged 47.
- DUNCAN.—On Sept. 1st, at Baden Baden, suddenly, James Matthews Duncan, Esq., M.D., LL.D., of Brook-street, Grosvenor-square, aged 64.
- GREEN.—On Aug. 25th, at Settle, Francis Green, M.D., L.R.C.P.
- OKE.—On Sept. 5th, at Cumberland House, Southampton, Robert Rouby Oke, M.R.C.S., aged 75.
- POOLEY.—On Sept. 3rd, at Northumberland Lodge, Cheltenham, Charles Pooley, F.R.C.S., F.S.A., &c. (late of Weston-super-Mare), in his 74th year.
- ROSS.—On Aug. 27th, at Wetherall, John Ross, M.B., C.M. Edin.
- WEBB.—On Aug. 27th, at Wirksworth, Derbyshire, William Webb, M.D., F.R.C.S.E., J.P.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Sept. 11th, 1890.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
Sept. 5	30.35	W.	61	59	108	78	58	..	Foggy
" 6	30.37	N.W.	62	59	95	75	57	..	Foggy
" 7	30.47	E.	57	55	98	73	55	..	Fine
" 8	30.49	S.E.	57	55	107	75	53	..	Foggy
" 9	30.34	S.W.	53	55	96	75	54	..	Overcast
" 10	30.20	S.W.	59	56	104	78	54	..	Foggy
" 11	30.19	N.	61	55	109	74	55	..	Bright

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

We cannot undertake to return MSS. not used.

THE STUDENTS' NUMBER.

Royal College of Surgeons, Ireland.—Notification has now been made to us that the Ledwich and Carmichael Schools, referred to separately in our Students' Number, have been merged in the Royal College of Surgeons, Ireland. The prospectus has not yet been published.

Charing-cross Medical School.—We are informed that the lectureship in medicine at this school, vacant by the death of Dr. Pollock, will be filled by J. Mitchell Bruce, M.A., M.D., F.R.C.P., who will also continue to lecture on therapeutics in the summer. H. F. Waterhouse M.D., M.Ch. Ed., F.R.C.S., has been appointed demonstrator of anatomy in this hospital.

W. E. Grigsby, LL.D.—Our correspondent's second letter has been duly received. We have made inquiries, and learn that it is customary in a case such as he describes to submit to the Company the facts as he states them to us, and that the Company usually reconsiders the application, probably by the light of a fresh examination. We think that he would be wise to follow this course.

Mr. A. J. Burgess is referred to an article on the subject in our present number.

TRANSE FOLLOWING INFLUENZA.

To the Editors of THE LANCET.

SIRS.—The case reported by Dr. Nathan Raw in THE LANCET of Aug. 16th gives me the opportunity of briefly relating the following.

A lad aged sixteen years, who had always been healthy, contracted influenza towards the end of January. He was not then under my treatment, but was nursed in bed for a day or two. Having to attend to his duties as under-groom, he went to his work before the influenza had quite passed off. After a week's illness he was sent home, when he came under my care, suffering from mental derangement with continual delirium by day. He threw an infant on the ground, attacked a child with a poker, and ran about the house half dressed; but at night he rested well without an anodyne. Aperients were administered, and he was carefully watched. In ten days' time his mind and recollection returned, and he went back to his place.

I am, Sirs, yours truly,

Staines, Sept. 10th, 1890.

HENRY APPLETON.

J. R. W.—We fear there exists no source of complete information of the kind required. A visit to the British Museum or application to the secretaries of the various hospitals might result in partial success.

W. H.—We have on more than one occasion raised such a protest as our correspondent suggests.

Medicus is referred to the article on Text-books in our last issue.

Dr. Sainsbury.—The notice appears on p. 516.

Deltoide.—"Physician and Surgeon."

RESISTANCE OF THE RED CORPUSCLES TO ELECTRIC DISCHARGES.

DR. LAKER of Gratz has introduced a novel method for the physical examination of blood. He repeatedly discharges the electricity of a Leyden jar through a capillary tube containing a drop of blood, and notes the number of discharges which suffices to cause the blood to assume a crimson-lake colour, comparing it with the number required to produce the same effect in healthy blood. He thus determines the specific resistance of the red corpuscles to electric discharges.

Nuntius.—We think a protest should be lodged with the editor of the paper against the practice of which our correspondent justly complains.

Dr. W. Sheppard (Liverpool).—We should give the preference to B.

Asthma should consult his medical attendant.

A HINT TO CANDIDATES FOR THE SERVICES.

To the Editors of THE LANCET.

SIRS,—That others may be forewarned, let them hearken to the following. I read for three months to get a surcease in the army, and read hard, for the average scoring in the winning list looked high. It only looks so, however, and is due solely to the enormously high rate of marking. Sound in mind and limb, I was sure of a favourable verdict from the medical board. All went well till the sight testing. As my vision has never troubled me or necessitated the wearing of a glass in my life, judge, then, my amazement at being pronounced physically unfit because, forsooth, I could not read Snellen's smaller type at twenty feet with the right eye alone in any but a good light. I read it easily with the left eye alone, and still more easily with both. I was given a rest and another trial, but all to no purpose. As a last chance, I appealed to the fountain head, who murmured mildly something about the goodly number of candidates, and lame ducks not being wanted. Representing that the right eye was the lame duck in my case, it was glanced at in a kindly-old-lady-like way, pronounced as looking a little weak (well it might after the testing with a dozen or so different glasses), and the chance of competing hopeless. Within half an hour my eyes were carefully examined at an ophthalmic hospital, with the following result:—Left, emmetropic; right, congenital myopic astigmatism; both structurally sound, and vision, with left alone or when both were used, practically perfect. Now, in the name of all that is logical, do men ever go to work with one eye shut and the other open? On peculiar occasions of policy I admit the trick with some is possible of performance. But do men operate at twenty feet, and can Snellen's type be regarded as such an infallible test that it forms the basis of a rule for State physical examinations? With the right eye (the offending one) alone, and without glass, I could quite see to tie an artery, and manage well enough were I deprived of the other in the ordinary affairs of life. All who would enter—ye even with suspicious saphenas and protuberant pampiniform plexuses,—be not disheartened; for the tests are not hard ones, neither will ye be rejected, for such to my knowledge have triumphed. But look to your eyes before starting, else all your stiff cramming may go for what it is probably worth—viz., nothing, which is a nuisance; and you are prohibited from competing in a career you have chosen which—well, is much worse. After all, when the disappointing draught is swallowed, the aftertaste is not so bad. One is free of the fetish which invariably has the "honour of being your obedient servant," which goes by the name of "red tape," and which in the matter of Snellen's type at twenty feet, with one eye winking wickedly, is an extraordinary little fetish indeed, and not to be denied. Sour grapes? Perhaps.—Yours faithfully,

Brighton, Aug. 2nd.

J. E. S. BARNETT.

MEDICAL BOOKKEEPING.

A CORRESPONDENT desires information as to the best and simplest system of bookkeeping for a non-dispensing practice.

Newcomer.—There is no rigid rule. It is better to follow the custom which has hitherto obtained in the locality.

Jurist.—We are not aware of any decision having been given in reference to the point, which is a purely legal one.

Dr. J. Phillips.—The paper will be inserted in an early number.

"CURIOUS CASE OF CONGENITAL DEFORMITY."

To the Editors of THE LANCET.

SIRS,—In reference to the case described by Dr. Wallace of Rugby under the above title in your issue of Aug. 30th I beg to report that a very similar case came under my own observation in the early part of last year. The abortive supernumerary digit was attached by a short pedicle of skin to about the middle of the proximal phalanx of the little finger. The nail was well formed. Nothing abnormal was noticed about the other hand. I cannot conceive that the umbilical cord could be a factor in the production of such a condition, especially in Dr. Wallace's case, where there was a distinct attempt at bilateral uniformity. When nature deviates from her normal course it is difficult to gauge her wanderings; but one can hardly imagine her vagaries extending so far as to establish one abnormality in order to arrest another, which would be the case if the cord were twisted round a supernumerary digit (or two), producing amputation. I think the absence of bone will suffice to account for the arrest of development, and also for the pedunculated condition of the abnormal digits in these cases. I am, Sirs, yours obediently,

E. ATHERDEN THOMPSON, L.R.C.P., M.R.C.S.

Kirkham, Lancs, Sept. 4th, 1890.

THE GRIEVANCES OF THE ARMY MEDICAL OFFICERS.

OUR contemporary, *Mr. Punch*, sets forth in the present issue, with his usual felicity and humour, some of the grievances of the medical officers of the Army and Navy Departments, and propounds a most effectual cure for the same. He publishes an account of an interview which a medical officer, with a martial manner and well set up, has with "Mr. Commissioner *Punch*," to whom he complains that, although he may fairly claim to be a soldier by reason of his capacity as surgeon in the army, and as having to risk his life, not only on the battle-field, but in the fever wards of a hospital, he is still looked upon and treated as an inferior being by the youngest subaltern in the service. The officer asks the good services of the "Commissioner" to obtain for his class greater recognition in the army. The "Commissioner" thinks that the title secured by scientific attainments ought to take precedence of all others more easily obtained. To this the medical officer replies that in a college common-room that is so, but not at the mess table of a depot centre. After further conversation the "Commissioner" cannot see, if medical officers are good drills and have some knowledge of the internal economy of a regiment and the rudiments of military law, why they should not enjoy the rank to which they aspire. He wishes them every success in their application, at the same time informing them that after all they are masters of the situation, and, with a sly twinkle, adds: "If your superior officers are unreasonable—physic them."

Mr. J. R. Nations.—The question is referred to in an annotation in our present issue.

THE VACCINATION COMMISSION.

To the Editors of THE LANCET.

SIRS,—I have sent to-day to Lord Herschell, chairman of the Royal Commission on Vaccination, the following lines, which I shall be most grateful to you to publish in the next number of your estimable paper.

I remain, Sirs, yours truly,

DR. WARLOMONT.

Brussels, Aug. 17th, 1890.

Brussels, Aug. 17th, 1890.

"MY LORD,—In the second Report of the Royal Commission on Vaccination Mr. Robert Cory expressed upon the vaccine delivered by my Institute some observations I am obliged to contradict. Mr. Cory states that my vaccine usually produces inflamed vesicles, and pretends that I only gather the lymph on the eighth day, which would be the cause of it. In the 'Manual of Animal Vaccination' (Churchill, London, 1885), p. 116, I have written the following lines:—'To use advantageously animal vaccine, either for vaccination or for preserving, it is necessary to choose the opportune moment. But this moment, which experience alone teaches us to recognise promptly, and as during which the pale areola has its transparent appearance and silvery colour, varies according to the temperature. In summer it most frequently arrives during the course of the fifth day; in winter during that of the sixth. There may be a margin of twenty-four hours, during which the matter remains transparent, but we must not reckon upon it. The most favourable moment approaches most nearly to that when the silvery tint has just commenced to show itself, under the guise of a little white border, parallel to the incision, or rather to the cicatrix which replaces it.' If Mr. Cory's assertion—that is to say, that the vaccine of my Institute is gathered on the eighth day—were exact, I should be acting in opposition to my own principles, which have been known and accepted throughout the world for twenty-five years. Is it likely? No. And it is because since many years my eye has been accustomed to the choice of the opportune moment that my vaccine, always gathered and prepared at the right time, has won its reputation, which Mr. Cory's affirmation will not shake. Mr. Cory is badly informed, and I regret it for him. Mr. Cory also speaks of inflamed vesicles. How can he ignore that, whichever is the lymph used, one must take into account such accidents, rare and usually very slight, and take into consideration the constitution of the patient and the operator's lancet."

"I remain, my lord, yours respectfully,

"DOCTEUR WARLOMONT,

"Directeur de l'Institut Vaccinal de Belgique."

"To the Right Honorable the Lord Herschell, Chairman of the Royal Commission on Vaccination."

"TWINS—ONE A MONSTROSITY."

To the Editors of THE LANCET.

SIRS,—The fact that one twin may be a monstrosity, and that the latest born is not an unusual occurrence, as suggested at page 478 of THE LANCET; this may be established by a reference to the "Medical Digest," Section 1580:1.—I am, Sirs, yours obediently,

Boundary-rd., N.W., Sept. 10th, 1890. RICH'D. NEALE, M.D. Lond.

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LETTERS, each with enclosure, are also acknowledged from—Dr. Waters, Liverpool; Mr. Naylor, Bolton; Mr. Bond, Cornwall; Messrs. Aitken and Andrews, Ticehurst; Mr. Coole, Horsham; Messrs. Steel and Jones, London; Mr. Marsh, St. Helens; Mrs. Delany; Mr. Wallis, West Chislehurst; Mr. Deacon, Manchester; Dr. Burland, N.B.; Mr. C. Jackson, London; Mr. Kneese, Bournemouth; Mr. Robertson, Paignton; Mr. Elliott, Göttingen; Mr. Purland, Woolwich; Mr. Garbutt, Gateshead; Mr. Knapp, Kingston-on-Thames; Mr. Barnby, Great Yarmouth; Mr. Moxon, Matlock; Mr. Twigg, Leeds; M. Olivier, Paris; Mr. Tyte, Minchinhampton; Mr. Davis, Bognor; Mr. Tully, Hastings; Mr. Kidston, Glasgow; Mr. Thorne, London; Dr. Lyon, Sheffield; Mr. Smith, Grimsby; Miss Minks, London; Mr. Harries, Llanelli; Mr. Ehrmann, Southam; Mr. Kelly, New York; Mr. Keely, Nottingham; Dr. Bryant, Tavistock; Miss Williams, Rhyl; Mr. Evans, Llanberis; Dr. Barnett, London; Mr. Murray, Strathly; Mrs. Lean, London; Dr. Powell, Everton; Dr. Mistri, Aden; Messrs. Street and Co., London; Mr. Pasker, Nottingham; Mr. C. Wilkes, London; Mr. Hughes, Wainfawr; Dr. McDougall, Runcorn; Mr. Davies, Newport; Mr. J. Bate, Huddersfield; Messrs. Jarrold and Son, Great Yarmouth; Mr. Heywood, Manchester; Messrs. Wertheimer and Co., London; Mr. Humphreys, Carnarvon; Mr. D. McBrees, Machynlleth; Mr. Tate, Huddersfield; Mr. Hatcher, London; Mr. Murdock, Folkestone; Mr. Bayes, Wellingborough; Dr. Reid, N.B.; Mr. Bates, London; Mr. Barnett, London; Mr. Warner, Sheffield; Mr. Starkey, Northwich; Mr. Cochran, Kirkcovan; Mr. Tidswell, Love; Suburb; M.D., Bucks; R. B., Dublin; C. H., London; School of Massage and Electricity, London; E. A., Harpenden; Alpha, Cheshire; Horses, London; S., London; Health, Bournemouth; Bonus, London; Beta, Maidenhead; D. C., London; Medicus, Maidstone; Hon. Sec., Southampton; Duplex, London; Carpe, London; Query, London; Alpha, Edinburgh; Medicus, Plymouth; Scope, London; M.O.H., Stockton-on-Tees; Doctor, London; Beta, Llanelli; F. J. A., Rhyl; W. H. D., Bristol; H. S., London; H., London; Ophthalmic, London; Taoro, London; Bertram, London; M.D., London; M.D., Bristol; James, London; Theta, Bournemouth; Physician, Bournemouth; Doctor, London; L. M., Manchester; Q., London.

NEWSPAPERS.—*National Review*, *The Arena*, *Journal of British and Foreign Health Resorts*, *City Press*, *Weekly Free Press*, *Hertfordshire Mercury*, *Windsor and Eton Express*, *Reading Mercury*, *Mining Journal*, *Leeds Mercury*, *Surrey Advertiser*, *Liverpool Daily Post*, *Liverpool Courier*, *Charity Record*, *Leslie's Illustrated Newspaper*, *Islington Gazette*, *Jamaica Gazette*, &c., have been received.

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Medical Diary for the ensuing Week.

Monday, September 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

Tuesday, September 16.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electrotherapeutics, same day, 2 P.M.

Wednesday, September 17.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, September 18.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

Friday, September 19.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, September 20.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

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Clinical Lectures ON GRAVES' DISEASE.

Delivered at the Hospital for Consumption and Diseases of the Chest, Brompton,

By HECTOR W. G. MACKENZIE, M.A., M.D.,

ASSISTANT PHYSICIAN TO THE HOSPITAL, MEDICAL REGISTRAR TO ST. THOMAS'S HOSPITAL, AND ASSISTANT PHYSICIAN AND PATHOLOGIST TO THE ROYAL FREE HOSPITAL.

LECTURE II.

GENTLEMEN,—In my last lecture I briefly described the various symptoms which cluster round the well-known phenomena of Graves' disease. I shall to-day proceed to consider the natural course and duration of the disease, and its terminations in recovery or death. Now, taking into account the length of time that the disease has been recognised and its comparative frequency in this and other countries, it is surprising that so little is definitely known about this matter and that such contradictory statements are made by different writers on the subject. Fagge¹ and Charcot² take the most hopeful view, both believing that recovery is the common result and death exceptional. Bristowe,³ although of opinion that the disease is not usually dangerous to life, thinks that recovery is rare and that in a large number of cases the disease is slowly progressive, at best after a while becoming stationary. Gowers,⁴ Hardy,⁵ and Eulenberg⁶ take a gloomy view, considering the prognosis as grave and death not infrequent. None of these writers, however, bring forward facts to support their conclusions. Fagge, indeed, admits that he knows of no positive evidence in support of his opinion. When incomplete I think all will agree that the disease is rarely fatal, but I shall bring forward some evidence to show that when well marked there is reason to believe it is dangerous to life. Trousseau in his lectures points out that there are two forms of the disease: one rapid and acute, the other slow and chronic—the former of rare occurrence; the latter the common type.

The shortest case I have heard of is one mentioned by Dr. Moore at a meeting of the Irish Medical Academy,⁷ where the symptoms came on in a young girl on reading a letter telling her of her brother's death, and were of only two days' duration. Solbrig⁸ published one of a boy aged eight, who suffered from palpitation, enlargement of the thyroid, and prominence of the eyes, and completely recovered after twelve days. Müller⁹ has recently reported a case in a girl aged ten years and a half, who recovered in six weeks. She had extreme awkwardness in the movements of the hands, frequent vomiting, lassitude, and pains all over the body, followed by exophthalmos and swelling of the thyroid. Bamberger¹⁰ and Michell Clarke¹¹ have each reported an acute case where death took place within six weeks of the onset of symptoms. Trousseau relates the case of a boy aged fourteen years and a half, who had symptoms of the disease for three months, when acute paroxysms of dyspnoea came on. These were relieved by bleeding, and all the symptoms subsided within four months of their onset. In five fatal cases at Guy's, Fagge says the disease was of recent origin. Fletcher¹² gives two striking instances of the rapid form of the disease characterised by emaciation, exophthalmos, goitre, and palpitation, both ending in complete recovery in a month or two.

Such cases are, however, extremely rare, and I have no example of this form to bring forward. It is evident from the recorded cases that complete recovery is more common than death. A considerable number of the chronic cases commence more or less acutely, as the history of the sudden onset of the symptoms indicates. The chronic character of the disease was well illustrated by the cases I showed at the last lecture, where the symptoms had lasted from six

months to several years. The cases I shall show you to-day are still more chronic, varying in duration between six and twenty years. That the duration of the disease is, as a rule, to be measured by years is a generally accepted fact.

At the discussion at the Ophthalmological Society in 1886¹³ very few actual recoveries were mentioned. Mr. Hutchinson mentioned the case of a gentleman who in 1872 had well-marked symptoms, exophthalmos, goitre, palpitation, and nervousness. In 1886 he was in excellent health, no exophthalmos, and only slight fullness in the neck. Dr. Hill Griffith mentioned a patient who, having had Graves' disease twelve years previously, still had right exophthalmos and enlargement of the thyroid on the right side. Of ten patients who were in St. Thomas's Hospital during the years 1878-80, four cannot be traced, two have recovered and are here to-day, one still suffers from the disease, and the other three are dead. I shall presently tell you of another case of recovery in a patient in St. Thomas's Hospital three years ago. Hale White¹⁴ found that of twelve patients who had been in Guy's Hospital in recent years, seven had died, four had recovered, and one was still suffering from the disease. Russell¹⁵ has reported a striking instance of recovery. A girl with exophthalmos, goitre, extreme emaciation, and intensely irritable nervous system recovered entirely, and nine years later the recovery seemed permanent. Gowers mentions a patient, twenty years under observation, in whom well-marked symptoms entirely passed away. Trousseau mentions a case of recovery after three years, but the case was not followed up. Undoubtedly, then, patients do recover, but in view of the heavy mortality which is indicated by the figures of Hale White and myself—ten deaths out of eighteen—and the few cases of actual recovery which can be brought forward, I do not think Fagge's statement that most cases end in recovery is borne out. Trousseau remarked that when recovery took place there always remained swelling and induration of the thyroid, with prominence of the eyeballs. You will observe in both the patients here to-day as cases of recovery that there is some fullness in the thyroid region, and in both there is exophthalmos—in the man moderate, in the woman extreme. In the other case of recovery of which I shall tell you, as in Mr. Hutchinson's case, the exophthalmos—formerly marked—has disappeared, and only slight thyroid fullness remains. In one of the chronic cases I shall show you the goitre has entirely disappeared, although all the symptoms are still severe. In two others the exophthalmos has much subsided. At the time the woman came under Dr. Bristowe's care, which was about five years after the onset of her symptoms, the goitre had quite disappeared and the exophthalmos was not conspicuous. There seems, therefore, to be no rule that one can lay down in this matter. Nor does there seem to be any rule as to the time which elapses before recovery. In two of my cases the symptoms had existed two years, in another ten years, before they disappeared. All but one of the very chronic cases I shall show you seem to be progressing towards recovery.

Death occurs, according to Eulenberg, from marasmus and intercurrent diseases. Bristowe says when death takes place it is mostly the consequence of some intercurrent affection, more especially of the lungs, but in rare cases the thyroidal tumour causes death by pressure on the trachea. Now, during the last ten years we have had six fatal cases at St. Thomas's Hospital, and I have accounts of two which proved fatal outside. Of these eight deaths, one was from bronchitis and two from cardiac disease, while the remaining five seemed to be directly due to the disease—one arising from an attack of dyspnoea, one from marasmus, and the other three being sudden, probably from syncope. The duration of the disease in one case was two years, while in the other seven it averaged about six years. Of seven fatal cases mentioned by Hale White, five died from intercurrent diseases and the other two suddenly. One of the latter cases is particularly noteworthy. The patient, who was up and about the ward seeing the electric current applied to another patient, asked to be allowed to try it. On the current passing she fell back dead, having been laughing and talking only an instant before she died.

I know of other cases of sudden death besides these I have mentioned. One of my patients has told me of the sudden death of her sister, who also had Graves' disease. Windle¹⁶ and Knight¹⁷ have each recorded a case. The

¹ Principles and Practice of Medicine, vol. i.

² Gazette des Hôpitaux, 1885. ³ Theory and Practice of Medicine.

⁴ Diseases of Nervous System, vol. ii. ⁵ Gazette des Hôpitaux, 1883.

⁶ Ziemssen's Cyclopaedia. ⁷ Brit. Med. Jour., vol. i, 1883.

⁸ Zeitschrift für Psychiatrik, 1871.

⁹ Brit. Med. Jour., vol. i, 1889.

¹⁰ According to Gowers, op. cit.

¹¹ Bristol Med.-Chir. Jour., 1887. ¹² Brit. Med. Jour., vol. i, 1863.

No. 3499.

¹³ Transactions, 1886.

¹⁴ Brit. Med. Jour., vol. ii, 1886.

¹⁵ Med. Times and Gaz., vol. ii, 1876.

¹⁶ Brit. Med. Jour., vol. i, 1882.

¹⁷ Boston Med. and Surg. Rep., 1868.

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average duration of Hale White's fatal cases was three years and three-quarters. In two fatal cases given by Drummond,¹⁸ the duration of the disease was five years. There is considerable variation, then, in duration among the fatal cases. Of cases which have come to my knowledge about half of the deaths have been due to the disease itself and the other half have been the result of the disease together with intercurrent affections. Death has occurred either early within the first year or at a later period, after the disease has existed from three to eight years. It is unwise to draw conclusions from these observations as to the proportion which die, but it is evidently considerable. Cases admitted to hospital are selected cases, and are on that account likely to have a worse prognosis than ordinary. It is difficult, however, taking everything into consideration, to agree with Bristowe when he says the disease is not usually dangerous to life. The elements of danger of the disease, apart from intercurrent diseases, appear to be a condition of marasmus characterised by emaciation, loss of strength, disinclination for food, vomiting, &c., the occurrence of attacks of dyspnoea, a tendency to syncope, and the supervention of mania. Death, however, as I have instanced, may take place without warning. Cases have been observed where there have been several definite attacks. Gowers mentions a patient who had three attacks, at intervals of several years; Trousseau, a lady who, for the sixth time during six years, presented all the symptoms of the disease, and was much benefited by hydropathic treatment. I have not, however, myself observed such a case.

Pathology.—No disease has had so many theories propounded or so many suggestions made to explain its various curious symptoms. The morbid anatomy may be very shortly summed up: General emaciation, an excess of fat in the orbits, or rather an amount in excess compared with the rest of the body, a thyroid gland which shows general hypertrophy, sometimes a persistent thymus, sometimes an enlarged spleen, sometimes an increased amount of connective tissue in the neck, sometimes enlarged cervical and bronchial glands, sometimes enlargement of the lymphatic structures of the intestine. No naked-eye changes in nervous system. Alterations in the sympathetic have been described by some pathologists, but such changes have been shown to be in no way peculiar to Graves' disease. Most careful and thorough examination of the pons, medulla, &c., in Dr. Bristowe's case¹⁹ by Hadden failed to reveal any microscopical change. Hale White²⁰ found minute hæmorrhages in the neighbourhood of the nuclei of the sixth nerve in a recent case.

It is curious that, among the many speculations as to the cause of the disease, that few should have attributed the disease to the enlargement of the thyroid gland itself. Koeber²¹ imagined that the goitre caused the symptoms by pressure on the sympathetic, a hypothesis it is unnecessary to discuss, as we know the symptoms exist without goitre. O'Neill²² cautiously remarks, "the thyroid gland has something to do with the production or continuance of the affection." Möbius²³ thinks the disease is akin to myxœdema, and caused by some chemical disturbance due to alterations in the thyroid, the one disease being due to increase of function, the other to loss.

Now, as there are undoubtedly cases which present all the symptoms of Graves' disease without any apparent change in the thyroid, and as apparently perfectly similar goitres exist without Graves' disease, it will be well to mention very briefly the other views which have been put forward. There is the affection of the sympathetic, with which Trousseau and others associated the disease, of which theory Long Fox²⁴ is perhaps the latest advocate. Now not only are the symptoms not those of affection of the cervical sympathetic, but, as I have mentioned, no change has been found in the ganglia or nerves by very careful microscopists. Begbie²⁵ attributed the disease to an altered state of the blood acting directly on the bloodvessels, and on the nerves of the heart. Begbie, as has been mentioned, laid more stress on the condition of the blood than is perhaps warranted by experience. The recent tendency has been to lay the burden of the disease on the central nervous system. Burney Yeo²⁶ says it is a neurosis of the

emotional nervous system. Hughlings Jackson looks to the ganglia about the fourth ventricle as the seat of the lesion. Hale White²⁷ and Michell Clarke²⁸ write in support of the same views. For very excellent accounts of the central nervous theory I refer you to recent papers by Fitzgerald²⁹ and Ballet.³⁰ I think too much has been made of some experiments by Filehne³¹ on animals. In one case he claimed to have produced exophthalmos enlargement of the thyroid and increased cardiac action by dividing the anterior fourth of the restiform bodies. It is unscientific to draw any conclusions from an isolated and uncorroborated experiment of this kind.

The minute hæmorrhages found by Hale White, already referred to, cannot be said to throw any additional light on the disease. As he himself admits, they are frequently found in patients dying of fever, and had this not been a case of Graves' disease would have had no importance attached to them. As I have already mentioned in the last lecture, hæmorrhages are not of rare occurrence in this disease, and Trousseau mentions cases of meningeal and cerebral hæmorrhages. The symptoms of the disease indicate a more widely spread affection than any mere limited lesion of the bulbar nuclei, and it is both useful and instructive to inquire how this group of symptoms have become associated together so as to form a disease. Fright, intense grief, and other profound emotional disturbance have been recognised as causes of the pathological condition, but I do not think that sufficient attention has been paid to the very close connexion between the chronic symptoms of Graves' disease and the more immediate effects of terror. The descriptions given by Darwin³² and Sir Charles Bell³³ of the condition of man in intense fear might almost have been written in regard to one of the patients we have been considering. The heart beats quickly and violently, so that it palpitates or knocks against the ribs. There is trembling of all the muscles of the body. The eyes start forward, and the uncovered and protruding eyeballs are fixed on the object of terror. The surface breaks out into a cold clammy sweat. The intestines are affected. The skin is flushed over the face and neck down to the clavicles. The hair stands erect. "Of all emotions fear notoriously is the most apt to induce trembling." The symptoms of terror are common to man and the lower animals.

The explanation of the evolution of the various symptoms is a deeply suggestive one. "Men during numberless generations have endeavoured to escape from their enemies or danger by headlong flight or by violently struggling with them, and such great exertions will have caused the heart to beat rapidly, the breathing to be hurried, the chest to heave, and the nostrils to be dilated. As these exertions have often been prolonged to the last extremity, the final result will have been utter prostration, pallor, perspiration, trembling of all the muscles, or their complete relaxation. And now, whenever the emotion of fear is strongly felt, though it may not lead to any exertion, the same results tend to reappear through the force of inheritance and association." There are one or two of the minor symptoms of Graves' disease whose independent occurrence under the influence of emotions is well known. These are pigmentary changes in the skin and hair, falling out of the hair, and epistaxis.

"With respect to the involuntary bristling of the hair, we have good reason to believe," Darwin says, "that in the case of animals this action, however it may have originated, serves, together with certain voluntary movements, to make them appear terrible to their enemies." To the starting forward of the eyes and the retraction of the upper lids, and the pigmentary changes, the same remark applies. Such being the condition resulting from severe terror, we have only to imagine the condition to become prolonged by a failure of the nervous system to recover its balance and to right itself, and we have a more or less complete clinical picture of Graves' disease. We have all the well-known symptoms—trembling, palpitation, flushing, sweating, exophthalmos, relaxation of the bowels. There is no information that I know of in regard to the enlargement of the thyroid gland under the influence of profound emotional disturbance. All one can say on that point is that the enlargement which takes place in those cases where the symptoms develop rapidly after such disturbance makes

¹⁸ Brit. Med. Jour., vol. i. 1887. ¹⁹ Diseases of Nervous System.

²⁰ Brit. Med. Jour., vol. i. 1889. ²¹ Diss. Inaug., Berlin, 1865.

²² THE LANCET, vol. i. 1878. ²³ Centralbl. für Nervenheilk., 1887.

²⁴ Bradshaw Lecture, 1882.

²⁵ Contribution to Practical Medicine, 1862.

²⁶ Brit. Med. Jour., vol. i. 1877.

²⁷ Op. cit.

²⁸ Op. cit.

²⁹ Dub. Med. Jour., vol. lxxv.

³⁰ Rev. de Méd., 1888.

³¹ Phys. Med. Soc., Erlangen, 1879.

³² Expression of Emotions.

³³ Anatomy of Expression.

it probable that this is actually the case. If this be so, we have had associated with one another, probably as long as the human race and its ancestors have existed, the symptoms which we find in Graves' disease. The existence of a certain abnormal condition of the nervous system having been once established, we know how in time it becomes dissociated from its exciting cause, rises to independence as a disease in its own right, and may require only a minimal incitement to set it off.³⁴ In many cases the disease is started anew by severe mental shock; probably in a good many more it is the expression of the unconscious memory of the individual of some such shock in an ancestor.

Such, gentlemen, is what I would suggest to you as the origin and development of this very curious disease. It is likely that the alteration of the function of the thyroid body whose importance in connexion with nutrition and the transmission of nerve force has been amply demonstrated has a good deal to do with many of the secondary symptoms to which I have called attention, but the real disease is a widely distributed derangement of the emotional nervous system.

Treatment.—Charcot³⁵ in a recent lecture says the malady is one of those which finds us prepared for battle. We are, indeed, able to attack it with many weapons, but only with a measure of success, as the protracted cases and the fatal cases show. A great many drugs have been recommended, of which the principal are digitalis, belladonna, iron, arsenic, and the bromides. As regards digitalis, I have found some patients very intolerant of it, while others seem really benefited by it. Most patients appear to benefit from belladonna, of which I generally give ten minims of the tincture three times a day. Iron alone there is good reason to believe is not beneficial, while arsenic is found useful. Some cases, especially the more restless, are soothed and quieted by bromides. Iodine internally in any form has aggravated many cases of the malady, although rare cases have benefited from it. The first patient I showed you at the last lecture improved greatly under belladonna and iron. The two cases of recovery I shall show you were treated with belladonna, but one of them also had galvanism. The other case of recovery I know of had only a fortnight's treatment, and that was galvanism. Galvanism has been used in the treatment of the disease for fully twenty years, and it was applied to the neck with the idea of galvanising the sympathetic. Faradisation has been found to give much better results by Vigouroux.³⁶ He recommends the positive pole, a large electrode 2½ in. to 3 in. in diameter, to be kept applied to the nape of the neck during the whole application. The negative pole, a small electrode about ½ in. in diameter, is then applied to the carotid at the angle of the jaw first on one side, then on the other, for about a minute and a half. Next the eyelids receive attention. The small electrode is then replaced by a plate 1½ in. in diameter, which is applied immediately above the sternum to faradise the goitre. Finally, the current is reversed and the latter electrode is placed over the third left intercostal space, to faradise the heart. The whole lasts ten or twelve minutes. It must be done at least every other day. The results of this treatment are said to be extremely good. I have only had one opportunity of trying it, and I cannot say that any improvement resulted. The few cases I have seen treated with galvanism to the neck have, I think, benefited. Hydropathic treatment has, since Trousseau's time, been held in much esteem in France, but I have no personal knowledge of its results. Besides these more or less elaborate therapeutic measures, there are simpler remedies, which all are agreed are of great power, and these are change of air, change of scene, and change of habits. The seaside or mountain air has brought about more rapid recoveries than any other means. At least one recovery is attributed to a sea voyage. Tea, coffee, tobacco, and alcohol, except in great moderation, it is needless to say, are contraindicated. It must be remembered, however, that many cases are most intractable. The benefit which results from leeching or bleeding during attacks of dyspnoea should be borne in mind, as in Trousseau's case, which I have already mentioned. In cases where the goitre threatens life by suffocation the question of operation arises. Lister³⁷ removed the bulk of

the tumour in such a case in 1877. There was alleviation of all the symptoms within a few weeks, and the patient, who was still alive in 1887, then presented few signs of her former malady. Tillaux claims to have operated with great success in two cases, but there seems to be a doubt as to whether they were really cases of Graves' disease. In a case in St. Thomas's Hospital, in which Sydney Jones removed the isthmus, there was only transitory relief, and the patient died within a month or two of the operation from cardiac disease. The operation is confessedly a dangerous one, and could only be recommended when life was already deemed sufficiently in danger.

The first three cases I have to bring forward are cases of recovery, to which I have already briefly alluded in the early part of the lecture.

CASE 16. Graves' disease in a male; recovery after two years; ten years later in perfect health.—The patient is a man aged thirty-nine, who was in St. Thomas's Hospital ten years and a half ago with well-marked symptoms of two years' duration; marked exophthalmos, large goitre, palpitation, trembling, and darkening of skin. He was treated with frequent and increasing doses of belladonna, so that at one time he was taking nearly half an ounce of the tincture in the day. He had also galvanism to the neck. The rapid cardiac action, 120 to 150 beats a minute, was the only serious symptom he presented, and while the exophthalmos and the goitre somewhat diminished under treatment this remained unaltered. At the end of two months he left the hospital, and within a fortnight resumed work, and although his occupation is very laborious he has never missed a day's work since, and has had no symptoms of any kind. At the present time there is still prominence of the eyes, but no von Graefe's sign. There is also some slight fulness in the thyroid region, and he finds it more comfortable to keep his shirt unbuttoned. There is no other sign of his old malady.

CASE 17. Graves' disease; symptoms ten years' duration; gradual recovery.—The patient is an unmarried woman aged forty-two who, twelve years ago, was taken ill with symptoms of Graves' disease, and ten years ago was under treatment at St. Thomas's Hospital, suffering from palpitation, trembling, extreme nervousness, extreme proptosis, and enlarged thyroid. She returned to work after some six weeks. The only treatment she had was fifteen minims of the tincture of belladonna three times a day. Her symptoms gradually subsided, although she has had no treatment, and has worked hard as a servant. For the last two years she has been quite free from symptoms of any kind. She has still extreme exophthalmos, and there is oedema of the eyelids; also some fulness in the thyroid region.

CASE 18. Graves' disease; recovery after two years.—This patient is a woman aged thirty-nine, who three years ago was under the care of Dr. Bristowe at St. Thomas's Hospital, with palpitation, trembling, extreme restlessness, emaciation, goitre, exophthalmos, slight albuminuria, oedema of eyelids and legs, and amenorrhoea, from which symptoms she had suffered for two years. She remained but a fortnight in hospital. The only treatment she had was the constant current to the back of the neck and thyroid. Still, when she left she had improved very much. Having heard from her that she had quite recovered, I asked my friend, Dr. Scott Tebb of Bournemouth, where she lives, to send me an account of her present condition. He informs me that she seems perfectly well, and weighs between eight and nine stone. The only trace of her former illness is a slightly enlarged thyroid. She dates the beginning of her recovery from the reappearance of the catamenia.

The next two cases are examples of one of the dangers of the disease to which I have referred—sudden death.

CASE 19. Graves' disease; sudden death during apparent convalescence two years from onset of symptoms.—This patient, a girl aged twenty-two, was in St. Thomas's Hospital in May, 1878, having for about a year suffered from palpitation, trembling, vomiting, sudden flushings, emaciation, proptosis, and goitre. She left the hospital after seven weeks, benefited. The trembling was subsequently the only trouble apparent to the friends, the proptosis and goitre remaining unaltered. She went to Eastbourne in September, and there gained flesh and strength. In March, 1879, the catamenia, which had been absent, came on. When due again she lost her voice and appetite. On April 8th she felt very languid, and her feet were much swollen. On the 12th she became

³⁴ See Creighton's Unconscious Memory in Disease, and Rindfleisch's Elements of Pathology.

³⁵ Gazette des Hôpitaux, 1885.

³⁶ Le Progrès Médical, 1887.

³⁷ Transactions of the Edinburgh Med.-Chir. Soc., 1886-87, and Myxœdema Report.

very faint, flushed suddenly, and died. This patient's brother, I may add, died from tumour of the brain in 1888, and her sister died from hydrocephalus.

CASE 20. Graves' disease; subsidence of symptoms; sudden death after parturition seven years from onset of malady.—This patient, at the age of twenty, was in St. Thomas's Hospital in 1877, having had symptoms for two years, extreme trembling, palpitation, perspirations, vomiting, much proptosis and slight enlargement of thyroid. She remained in the hospital two months and went out benefited. The prominence of the eyes did not disappear altogether, but in the course of a year or two they almost resumed their normal condition, rather full or prominent. The trembling also subsided after about three years, and she made no complaint of palpitation. She remained, however, spiritless and devoid of ordinary hopes and aspirations. After giving birth to a child in May, 1883, she died suddenly when apparently in as good health as she ever was.

So much for cases of recovery and death. The chronic cases, which I shall now show you, illustrate not only the long duration of the disease, but many of the points which I emphasised in the last lecture, such as absence of exophthalmos or enlargement of thyroid, heredity, tremor, cramps, pigmentation, connexion with fright, &c.

CASE 21. Graves' disease; absence of exophthalmos; other symptoms well marked.—The patient is a young woman aged twenty-one, who has been under observation for fifteen months. During all this time she has had very rapid pulse and palpitation, tremors, attacks of trembling, great objective and subjective heat, sudden flushings, sweating, loss of flesh, coming out of the hair, irregular menstruation, together with moderate enlargement of thyroid and without exophthalmos or von Graefe's sign. She has attended intermittently, as she lives at a considerable distance. I have given her belladonna, but I cannot say that her condition now is materially altered from that of her first attendance.

The next two patients I have to show you are sisters, in the younger of whom the symptoms have been present for six years, in the elder for eleven years. In the latter the disease is subsiding.

CASE 22. Graves' disease, duration six years.—This patient, Eliza W., aged thirty-one, is unmarried, and a servant. She has slight exophthalmos, slight œdema of the eyelids, well marked von Graefe's sign, but no retraction of upper lid. There is only slight thyroid enlargement. She has very troublesome palpitation and trembling attacks, and the characteristic tremor is well marked, together with a number of other symptoms. In 1883 she was very much frightened by being left alone at night in an empty house, next door to one which had been visited by death, where she could hear the coffin brought in and other preparations being made. Shortly after this she began to suffer from palpitation, while the eyes became prominent and the neck swollen. She first came to the Brompton Hospital in 1885, and there was then marked exophthalmos, with von Graefe's sign, and a goitre of fair size. Trembling was first noticed in 1886. She has attended off and on during the last four years, taking as medicine iron, quinine, and digitalis, and lately belladonna. Since she has been attending the exophthalmos and the goitre have diminished, but her troubles now are apparently as serious as when she first came. She now, as she has done throughout the last three years, suffers from trembling, which is always worse with worry or excitement, painful cramps, especially in the calves of the legs, nocturnal sweating in the face and hands, burning heats, and flushings in the head and neck. She has frequently felt the "giving way of the legs." She thinks the colour of her face has on the whole become darker, and it is now certainly dark, although there are no patches of pigment. Her hair is thin, and has come out very much. She is unnaturally irritable, and suffers from globus. She has lost flesh, and the catamenia are scanty.

CASE 23. Graves' disease; duration eleven years.—Mrs. S., aged thirty-four, sister of the subject of the previous case, first began to suffer from the symptoms eleven years ago. When twenty-three she had a very severe confinement, being five days in labour. Soon after she began to suffer from trembling and fainting fits. She next noticed the swelling of the thyroid. The eyes gradually got larger and more prominent. Palpitation did not trouble her until two years later. She had acute

rheumatism at the age of nine. She first attended this hospital in November, 1885. At that time exophthalmos was very marked, and von Graefe's sign was present, the thyroid was considerably enlarged, the pulse was rapid (140), and the hands trembled much, as her autograph then written bears witness to. Points of interest are, that at one time she suffered much from very bad cramps, attended with drawing up of the limbs, that she has had frequent and excessive epistaxis, and that at one time she lost flesh very much. Her whole condition has during the last eighteen months been much ameliorated. The heats and flushings have subsided, diarrhoea (formerly troublesome) has ceased, and the trembling and palpitation are much less frequent. The tremors can still be seen in her hands, there is slight prominence of the eyes and slight von Graefe's sign, and the goitre remains very large.

CASE 24. Graves' disease; duration eleven years.—I may here mention another case in which the duration has been eleven years. The patient, Mrs. I., aged thirty-six, was in St. Thomas's Hospital nine years ago with well-marked symptoms, goitre, cardiac action 110, but no exophthalmos. She wrote me a few weeks ago saying the goitre had not diminished in size, and that the palpitation was as bad as ever. The trembling has, however, ceased for some time. Her eyes have not become prominent.

CASE 25. Graves' disease; duration eleven years; large goitre, but no exophthalmos; sister also affected.—The patient, Mrs. R., is thirty-one years old. She has had palpitation and trembling since the age of twenty. She has considerable thyroid enlargement, which she first noticed when she was twenty-seven. Her only other illnesses have been frequent quinsies. In July, 1886, she first attended this hospital on account of palpitation and pain in the throat and back. She had then considerable enlargement of the thyroid and violent intermittent cardiac action. After attending under Dr. Bruce for six months, being treated with iron and digitalis, she left much benefited, the goitre having almost entirely disappeared, and for nearly two years she felt quite a different woman. In the spring of last year she returned, suffering as before from palpitation, and also from attacks of trembling coming on two or three times a day. There were then, as there are now, very marked tremors of the hands when held out, and a considerable goitre. I noticed slight prominence of the left eye, but as a rule exophthalmos has been completely absent. Now the palpitation is very troublesome, and the trembling fits are very distressing, occurring from the slightest causes. She gets bad cramps in the legs, especially at night. Her legs give way at times. She is much troubled with heats and flushings. Her hair is thin, and has come out very much. She brought her sister to see me lately, saying she suffered in the same way, with trembling and palpitation. I found an enlarged, soft thyroid and cardiac action 136 to the minute.

CASE 26. Graves' disease over thirteen years; excessive trembling, exophthalmos, pigmentation of skin; formerly considerable goitre, but no enlargement of thyroid now.—Mrs. D., aged forty-nine, is under my care at the Royal Free Hospital. She is extremely tremulous. The trembling interferes with writing and needlework, but she can carry a cup to her mouth fairly steadily. She has attacks in which she trembles all over. She has moderate exophthalmos and both von Graefe's and Stellwag's signs are present. There is no apparent thyroid enlargement. The pulse varies between 124 and 144, and there is a mitral systolic murmur. She has attacks of palpitation several times a day without apparent cause. Her face has a greasy, yellowish look and a scar on her forehead is stained a deeper yellow. On examining the skin of the body one finds a brown, pigmented rash, specially affecting the axillæ and sides of the chest. The outer and back parts of the thighs are similarly affected. Her hair is thin, and on account of falling out so much has been cut quite short. She suffers from sweats and flushings, cramps in the feet, hands, and knees, and troublesome diarrhoea from time to time. She has had a cough every winter for five years, and there are slight signs of phthisis at the right apex. At the age of twenty she received a severe mental shock, and was unable to move for twenty-four hours. She was in bed for six months, was catheterised for difficulty of micturition, and treated with pessaries for supposed uterine trouble. She has suffered frequently from migraine. It was not till she was thirty-six that palpitation began to trouble her, and then only on exertion. When thirty-nine it was observed that her eyes

were prominent, and she discovered a goitre, which rapidly enlarged. The goitre remained large four years and then disappeared.

CASE 27. *Incomplete Graves' disease; trembling, palpitation, pigmentation of skin, falling out of hair, attacks of spasm of hands and feet, emaciation, menorrhagia; sister to subject of preceding case.*—Mrs. J. L.—, aged forty-three, is also attending under me at the Royal Free Hospital. She suffers from palpitation and trembling. The attacks of palpitation have been troublesome during the last three years, but only when excited or worried. Trembling, which she has noticed all her life to a certain extent, has been much more marked during the last three years. Both hands tremble when held out, especially the left, and she feels a trembling throughout the body. There is no exophthalmos, and no perceptible enlargement of the thyroid. The cardiac action has varied between 88 and 108 when counted. No abnormal physical signs in heart or lungs. She always feels better in cold weather than in hot, but experiences no disagreeable feeling of heat. She has flushings to the head. There is a brown pigmented discolouration of the skin on the abdomen and the back below the spines of the scapulae, also on the upper parts of the arm and the bends of the elbows. Her hair is thin and has fallen out very much. She is thin and has lost flesh considerably. The urine contains neither sugar nor albumen. The catamenia are excessive. She has had quinsy twice, and formerly had enlarged tonsils. For the last four years she has suffered about every week from definite attacks of migraine. At the age of nineteen she began to have fits of a peculiar kind, and these became worse and more frequent after twenty-six. In these attacks the hands and feet become rigid, and the thumbs turn inwards. She never quite loses consciousness. She is irritable and low-spirited. The family history of these two patients is interesting. Their father trembled nearly all his life; he was deaf, and this was said to be due to enlarged tonsils. One brother suffered from fits, and another is said to be extremely nervous.

CASE 28. *Graves' disease; duration twenty years; now cramps, slight goitre, and exophthalmos, but rarely palpitation and trembling.*—The last patient I have to show is Mrs. F.—, aged forty-two, who has a history of Graves' disease extending over twenty years. She has had no other illness except ague, when a girl in Cambridgeshire. When twenty-two she noticed that her eyes were becoming prominent, and a goitre, of whose existence she was unaware, was discovered by her doctor. When twenty-five the goitre began to cause her inconvenience, and she also commenced to tremble very much. Sometimes she was so agitated she could not sign her name, and her writing was generally so shaky that she was quite ashamed of it. Another trouble then was great heat. It was not until she was thirty-two that palpitation troubled her, and she then first attended this hospital. In 1882 Dr. Bruce, under whose care she was, noted exophthalmos to a degree, together with considerable goitre and a mitral murmur. She was thin and unhealthy looking, and suffered from sweats, headache, and dysmenorrhœa. She did not attend very regularly, but generally experienced benefit from the medicine she took, consisting of iron, quinine, and digitalis. Her hair, which is very scanty, turned grey at thirty, and then began to come out very much. She has frequently suffered from diarrhoea and vomiting. She often had the giving way of the legs, and was unable to stand any length of time without falling. Trembling and palpitation continued bad until two years ago. Now she has no tremors, and only rarely trembling or palpitation. In March, 1888, she had tonic spasms of the hands, lasting some days, and she has had several attacks since. She occasionally has painful cramps in the legs. At the present time there is much visible pulsation of the vessels of the neck. The thyroid is only slightly enlarged, and there is slight exophthalmos, but no von Graefe's sign.

DISTRICT COTTAGE HOSPITAL, WATFORD.—The annual report, just issued, shows a considerable addition to the number of patients treated during the past year, and the growing usefulness of the institution. Since the opening in August, 1886, to the end of June, 1890, 229 patients were admitted, of whom 83 were treated in the year under review, against 59 in 1888. Of the 83 patients, 4 died, 67 were discharged cured or relieved, and 11 remained under treatment. The income, from all sources, amounted to £534 8s. 8d., and the disbursements to £549 8s.

ON THE ANALGESIC VALUE OF ANTIPYRIN INTRA- AND POST-PARTUM.

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FIRST used as an antipyretic in large doses, antipyrin has been found during the past five years to be an almost universal panacea in smaller doses for "nerve pain," and is now prescribed empirically in all cases of neuralgia of whatever part of the body. Its value in certain cases of dysmenorrhœa of the so-called "spasmodic" type first directed attention to the generative organs as a field for its use, and the medical journals up to the present time have scattered through them results arising from the use of antipyrin (certainly of a most variable character) in connexion with the pregnant condition and labour. It was with the object of verifying these results or not that the following investigations were undertaken. Windelschmid¹ published, among the earlier observers, an interesting case of relief from dysmenorrhœa which had lasted eight days, the patient being very violent. Relief was obtained by rectal injection of three doses of two grammes (about thirty-one grains) of the drug; the two first with an interval of twelve hours, the third twenty-four hours later. Convulsive action, which was present before its administration, also ceased. Dellenbaugh² and Choupe³ also relate similar instances; the latter, in addition, found great benefit from a rectal injection given to a patient with a painful uterine myoma which had resisted all other remedies.

The mode in which this drug relieves uterine pain is doubtful; it is well known and, I think, generally acknowledged that the most essential properties of the uterine muscular fibres are: (1) Extensibility; (2) retractility; (3) contractility. The last is quite distinct from retractility, and always occurs when a strange body is to be expelled from the uterus. Uterine pains are produced by two different mechanisms: (a) When there is an absence of retractility and, as a consequence, the formation of clots; and when (b), in spite of sufficient retractility, pains persist in consequence of intemperate use of ergot, or retention of placental debris. Rivière⁴ thinks that antipyrin relieves the pain included in this latter class, but without touching or influencing the contraction. My own opinion, based on the following observations, is that the pain which the drug relieves is entirely a "nerve pain," or neuralgia uteri, and that its action on muscular uterine fibre is negative. I may quote Chiara⁵ in support of this assertion, who, as the result of its use in twelve cases of pregnancy, found that "in therapeutic doses, it does not show appreciable effect enough to make one believe in it as having an oxytocic or exciting action on the uterine fibre during pregnancy and the physiological state."

The questions which seem to be at issue regarding the use of this drug are the following: 1. Does its administration during or immediately after labour tend to relieve pain, and, if so, at what stage are its effects most marked? 2. Has it any effect on the uterine pains in augmenting their number or intensity, or the reverse? 3. Is cervical dilatation more rapid under its influence? 4. Does its administration promote or tend to post-partum hæmorrhage? 5. What is its effect upon the process of lactation? The property it possesses of diminishing high temperatures, as in puerperal fever, is of the highest value, but it appears to me outside the questions at issue. I think a word of warning should be given, however, as to its indiscriminate use in large doses in attempting to reduce pyrexia, as I have met with records of several deaths from collapse in the course of my research. Under the first heading the question naturally resolves itself into the relative value of the drug during the two stages intra- and post-partum.

To elicit an answer to the above, I carefully administered the drug to forty-two cases, and selected as many primiparæ as possible in consequence of the usually more lengthened

¹ Allgemeine Med. Central. Zeitung, 1888, No. 53.

² New York Med. Record, vol. i., 1887, p. 579.

³ New Orleans Medical and Surgical Journal, April, 1888.

⁴ Gazette Hebdomadaire des Sciences Médicales de Bordeaux. 1888.

No. 32.

⁵ L'Antipyrina in Ostetricia: Annali di Ostet. Ginecol. e Ped. 1885, p. 5.

stage intra-partum; thirty-one were of this type. The others, eleven in number, were chosen at random. The drug was not given until labour had commenced, and until the dilating pains had set in regularly; the number occurring in an hour was noted, and then compared with those which passed in the same time shortly after the administration of the drug. The temperature and pulse were taken at regular intervals, and notes made at the time as to the severity of the pains and the patient's statements as to the relief or not given by the medicine.

I append a typical case:—The patient was aged twenty-nine years and a primipara. Induction of premature labour at about the thirty-sixth week for slight pelvic contraction. March 11th, 1889 (3 P.M.): Induction by passage of a catheter. 12th: At 4.5 A.M. pains began, and recurred at 4.20, 4.32, 4.45, 4.52, 5.10 (or about six in one hour). At 5.27 A.M. fifteen grains of antipyrin were administered. The pains occurred at 5.55, 6.0 (sick), 6.7, 6.20, 6.30, 6.42, 6.55 (or seven in one hour, about), 7.10, 7.23, 7.30 A.M. At 7.45 A.M. a second dose of antipyrin (fifteen grains) was given. At 8.5 A.M. the patient was sick; at 8.15 she slept for eight minutes; pains occurred at 8.40, 8.55, 9.15, 9.40, 9.53, 10.15, 10.30, 10.35, 10.57, 11.20, 11.47, 12.16 noon (fourteen pains in four hours, or less than four in the hour). Cervix fully dilated, waters ruptured artificially. Labour terminated at 6.40 P.M.; living female child. Between rupture of waters and termination of labour, six hours and a half (nearly).

The method of administration was by the mouth and in 15 gr. doses, made up with half a drachm of compound spirit of ammonia and cinnamon water, including two doses given during the expulsive stage. Sixty grains were given. Sickness occurred after each dose during the first stage, and after the second during the expulsive stage. It will be noticed that the medicine had a slight effect on the rapidity of the pains, if anything there being a tendency to slight retardation at first, becoming more marked after the second dose. There was no doubt as to the relief from the pain after the first dose, both from the patient's own statements and from her appearance to bystanders, more after the second, but absolutely none during the expulsive stage. There was no post-partum hæmorrhage, and successful lactation followed. Appended is a table showing the results of the administration of the drug in the forty-two cases. It will be seen that I have divided this into four columns, and under the heading "Result" have given the value of the drug as judged by results obtained—i.e., whether from the patient's evidence or from her change in behaviour.

		Total Cases.	RESULT.		
			Good.	Mode-rate.	Negative.
Stage of dilatation	(a) Primiparæ ..	31	15	6	10
	(b) Multiparæ ..	11	4	3	4
Stage of expulsion	(a) Primiparæ ..	12	0	4	8
	(b) Multiparæ ..	5	0	1	4
Post-partum ..	(a) Primiparæ ..	1	0	0	1
	(b) Multiparæ ..	8	5	0	3
As an agalactic ..	(a) Primiparæ ..	3	1	0	2
	(b) Multiparæ ..	4	0	2	2

Taking, first, the stage of dilatation, it will be seen that in 15 cases out of the 31 in which the drug was administered, or nearly 50 per cent., it was very beneficial—i.e., the patient either strongly asserted that she felt great relief, or it was self-evident by her falling asleep or becoming more quiescent. Among the multiparæ the cases relieved were not so great in proportion—viz., 36.3 per cent. On the other hand, the absolute failures among the primiparæ amounted to 32.2 per cent., while among multiparæ it was 36.3 per cent. Queirel,⁶ who admits the value of the drug chiefly in this stage, found its success undoubted in 15 women out of 20, or 75 per cent. Of these 15 patients, 11 were multiparæ, the other 4 being primiparæ. Of the 5 refractory patients, only 1 was a multipara, thus concluding rather that the action of antipyrin is more marked on that class. Winkle⁷ now never administers it

except during this first stage, and he has found the relief following its administration almost general. By comparing statistics when the drug was taken and when not, he gathered that it does not increase the duration of the first stage; but, on the contrary, tends to shorten it on an average about half an hour; while in the second stage it remains practically the same. Grandin⁸ corroborates these views. In the expulsive stage the results were practically negative, as absolute relief was never observed either in primiparæ or multiparous patients. I believe that this statement is corroborated by all the writers on this subject, with one or two exceptions—viz., Fauchon⁹ and Lielski,¹⁰ the latter of whom found the results in his four cases "invariably excellent." Its administration post-partum for after-pains was chiefly among multiparæ, indeed I only once had a case of a primipara in which it could be called necessary, and there it was quite without effect. In the 8 multiparæ to whom it was given it was certainly very beneficial in 5, or 62.5 per cent.; and I found that the failures were those in which the after-pains were chiefly due to collection and expulsion of blood clot, while the successful ones were those in which the pains were more of a grinding and neuralgic character, and not followed by passage of clot. Milne¹¹ and Choupe¹² both found antipyrin of great value in these cases.

From the nervous influence which is doubtless at work in connexion with the process of lactation, it would be almost concluded without experiment that antipyrin would have some marked effect on the amount of milk secreted. Salemi¹³ mentions the case of a primipara of robust constitution. Weaning was necessary from the breasts being neglected and having become covered with sores. Ten days were occupied in attempting to effect this, including the use of iodide of potash and compression, but they all failed. He then gave 50 cgr. of antipyrin divided into three doses; the secretion diminished the first day, ceased the third, and did not return. My own experience is not so favourable; the drug failed entirely in two cases out of three in which it was given, but certainly succeeded in one. The patient was a nervous primipara confined prematurely, with much distended breasts and large quantities of milk. Her child died on the fifth day of immaturity. I used compression and 15 gr. doses thrice daily and ordered the usual diet; the effect was very rapid, and she felt relief after twenty-four hours, and the secretion ceased practically on the fourth day. The two multiparæ were absolute failures. Antipyrin is not eliminated by the milk secretion, and hence its use is not contraindicated in these cases. The effects of the administration of antipyrin on the cardiovascular functions and the nervous system are well worthy of note. Knorr and Filehne¹⁴ first pointed out the usual pulse retardation in 1884, while Winkle observed that generally the temperature fell from half to one and a half degrees F. After a dose of 15 gr. he found the pulse become somewhat more frequent and respiration quickened; but if the pulse at the time of giving it was rapid, it decreased it. My own experience is that in the greater number of cases, in addition to a slight reduction of temperature, half an hour after administration the pulse was diminished in frequency, the patient having at the same time, however, a sensation of palpitation, respiration did not appear to be appreciably affected. Dark and thin patients of neurotic type certainly seem to be more susceptible to its influence, and this is corroborated by Adams,¹⁵ who, in an elaborate paper on the therapeutics of the drug, warns us to administer it in small doses "to phthisical and thin people." Antipyrin may be administered by mouth, rectum, or by subcutaneous injection. The last is rendered much less painful by the addition of cocaine. By mouth it should always be taken with some diffusible stimulant like ammonia. Fatal cases as the consequence of its administration have been several times reported, but never during labour, and I know of no reason why it should not be given without apprehension provided the dose is below 25 gr.

Conclusions.—1. That antipyrin in doses of fifteen grains, repeated at proper intervals, is a remedy of great value in the dilating stage of labour, and more especially in primi-

⁸ Ibid., 1888, vol. xlviii., p. 38.

⁹ Bulletin Général de Thérapeutique, 1888, tome cxv., p. 81.

¹⁰ Wiadomoscie Lekarskie, 1888, No. 10, p. 289, quoted in New Orleans Med. and Surg. Journal, 1888, p. 233.

¹¹ New York Medical Record, 1888, vol. xxxiii., p. 38.

¹² Loc. cit.

¹³ Bulletin Général de Thérapeutique, 1888, cxiv., p. 554: L'Antipyrine contre le Secréto du Lait.

¹⁴ Berlin. Klin. Wochens., 1884, No. 20.

¹⁵ Journ. Amer. Med. Assoc., 1885, vol. v., p. 621.

⁶ La Semaine Médicale, 1888, p. 93: De l'Antipyrine dans les Accouchements.

⁷ New York Medical Journal, 1889, vol. xlix., p. 14: Antipyrin during the First Stage of Labour.

22.5; Hanover, 26.8; Cologne, 34.6; Königsberg, 38.2; Krefeld, 36.1; Leipzig, 42.8; Magdeburg, 45.3; Munich, 38.4; Nürnberg, 30.2; Stettin, 35.1; Strasburg, 31.9; Stuttgart, 24.5. A comparison of these figures with the death-rates of the same or the preceding week—of Amsterdam, 18.7; Budapest, 29.9; Dublin, 20.5; Copenhagen, 20.3; Liverpool, 25.2; London, 19.2; Paris, 20.3; St. Petersburg, 23.2; Warsaw, 27.5; and Vienna, 20.0—gives rise to reflections by no means flattering to the Germans. The average death-rate of the German cities of more than 100,000 inhabitants in the week in question was 31.43; that of the ten other European cities named, all of which have a population of more than 300,000, was only 22.48.

A New Biological Station.

The biological station on the Plöner See in Schleswig-Holstein, the first for the investigation of the fauna and flora of an inland lake, will be opened next April. Dr. Otto Zacharias of Hirschberg, who has been engaged for several years past in investigating the fauna of the North German lakes, is to be the head of the station. The total area of the Plöner See is 809 square kilometres, and its greatest depth is about 60 metres. The Prussian Ministers of Education and Agriculture have promised considerable contributions for the next five years.

Professor Paul Ehrlich.

Dr. Paul Ehrlich, who has recently been appointed professor of medicine in Berlin University, was a pupil of the pathologist, Julius Cohnheim. His exact knowledge of chemistry, and especially of aniline pigments, has enabled him to pursue with signal success the paths opened up by Robert Koch. His first important investigation was that of the blood-corpuscles. He extended in some particulars the knowledge of the red blood-corpuscles, and showed that one must not regard the blood-corpuscles as of equal value, but must strictly distinguish certain classes among them. In 1880 he discovered the necessity of distinguishing basic from acid aniline pigments, a discovery which contributed to Koch's discovery of the tubercle bacillus in 1882. Soon after this important event Ehrlich invented a method which considerably facilitated the demonstration of the presence of tubercle bacilli. Another important contribution of Ehrlich's to medical science and practice was the observation that certain not yet known aromatic substances which are found in the urine in certain diseases react in certain ways when treated with sulphodiazobenzole, a fact which has proved of importance in the diagnosis of typhoid fever. Ehrlich has also made a special study of the biological effects of methylene blue. He has used this substance in investigating the impregnation of the various tissues of the bodies of animals with oxygen. In the course of these experiments he discovered that methylene blue reacts on living nerve tissue in a special way, which enables one to distinguish sensory from motor nerves. He has recorded the results of his investigation of methylene blue in a treatise entitled "The Necessity of Oxygen for the Organism." He has also published clinical observations and experimental studies of hæmoglobinuria, the infarcts of the heart, typhus, pleurisy, degeneration of ganglion cells, poisoning by phosphorus, &c. He is thirty-seven years of age.

The Sixteenth Meeting of the German Society for the Promotion of Public Health.

The discussions of the sixteenth general meeting of the German Society for the Promotion of Public Health began on the 11th inst., at 9 A.M., at Brunswick, with Burgomaster Boetticher of Magdeburg, in the chair. About sixty German and foreign cities, including Vienna, Salzburg, and Christiania, were represented. The Hall was crowded. I must, however, reserve a full account of this sitting for my next letter.

Berlin, Sept. 15th.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The next class for the training of regimental stretcher-bearers will be held at the headquarters of the London Scottish Rifle Volunteers, Victoria-street, S.W., commencing on Monday, Sept. 29th, 1890, at 7.30 P.M. Officers, non-commissioned officers, and men who are efficient can obtain application forms from either of the hon. secretaries, R. R. Sleman, ambulance sergeant, Artists' Rifle Volunteers, 7, St. Benet-place, Gracechurch-street, E.C.; or C. J. Downer, colour-sergeant, London Scottish Rifle Volunteers, Glenholme, Willesden-park, N.W.

Medical News.

RABIES IN IRELAND.—The Boyle correspondent of the Dublin *Express* says:—"Rabies has attacked the Boyle harriers, and several of the dogs have been shot."

THREE medical men who were charged [with carrying out regulations connected with the cholera epidemic in Spain were recently set upon by the populace and murdered.

A SMALL-POX HOSPITAL FOR MIDDLESBROUGH.—An inquiry into the application of the Middlesbrough Town Council for sanction to borrow £1254 for the purpose of purchasing a site and erecting thereupon a small-pox hospital was conducted by Col. Walter. M. Ducat, R.E., and Dr. F. W. Barry, both of the Local Government Department, the inspectors, will report to the Local Government Board in due course.

CONVALESCENT HOMES.—At Todmorden, on the 13th inst., a convalescent home, which has been erected through the munificence of the two Misses Ormerod, daughters of the late Mr. Abraham Ormerod of Todmorden, was opened by Lady Eleanor Cicely Clifton. The building is situated at the junction of Clifton Drive with Todmorden-road, St. Anne's-on-the-Sea, and is a fine specimen of domestic architecture.—On the 10th inst., the Marquis of Bristol presided at the inauguration of a new wing added to the Felixstowe Convalescent Home through the liberality of Mr. W. Cuthbert Quilter, M.P. A large company assembled upon the occasion.

ASSOCIATION OF PUBLIC SANITARY INSPECTORS.—This Association will visit the crematorium at Woking, Surrey, on Saturday, Sept. 27th. An address will be delivered by J. C. Swinburne Hanham, Esq., barrister, secretary of the Cremation Society, on the subject early in the ensuing session, in view of which Mr. Hanham has consented to receive the members who attend on that occasion. Special accommodation will be reserved in the train which leaves Waterloo Station at 2.12 P.M. on the date in question. Application for railway tickets may be made to Samuel C. Legg, 117, Powerscroft-road, N.E., if possible not later than the 20th inst.

STROUD HOSPITAL CENTENARY.—Rejoicings commemorative of the foundation of Stroud Hospital gave this town a gay aspect on Saturday last. The centenary of the hospital was distinguished by the laying of the memorial stone by George Holloway, Esq., M.P., of a new wing which is in course of erection. A large number of ladies took advantage of the occasion to endeavour to raise money by the sale of flowers and by collection for the funds of the hospital. The first Hospital Saturday in Stroud was so successful that there is every prospect of its becoming an annual event. In the afternoon a monster procession was formed by members of public Societies and representatives of local industries, who marched to the hospital, where many speeches were delivered.

THE M'LEAN HOSPITAL, DUNFERMLINE.—At a meeting of the Dunfermline Parochial Board last week, Lord Elgin drew attention to a matter affecting the M'Lean Hospital. It seems that the Combination Poorhouse is in need of alterations and additions, and it is proposed to allow this hospital, at present used as a fever hospital, to be transferred from the Parochial Board to the Combination Board, according to certain references dealing with the value of the hospital, and questions of law connected with such negotiations. It was objected that possibly the Burgh Local Authority, the business of which was now vested in the County Council, ought to be consulted in the matter, and further, that such a transference would leave Dunfermline with an infectious disease hospital. Ultimately it was decided that, unless there was very urgent need for the change which was proposed being made, it would be better for the Parochial Board to agree to the reference, subject to the condition that the Combination Board and the M'Lean trustees agree to communicate with the district committee of the County Council and the Burgh Local Authority.

NEW HOSPITAL FOR THIRSK.—Colonel Dawnay, M.P., opened on Tuesday a new hospital at Thirsk, which has been erected by Miss Lambert of Sowerby at a cost of £2000, and is endowed with £220 a year.

MYSTERIOUS DEATH OF A MEDICAL MAN.—Mr. Paul Belcher, L.R.C.P. Lond., M.R.C.S., L.S.A., was found in bed in an unconscious condition on Wednesday morning last. Efforts were made to restore animation, but without avail. A small bottle containing hydrocyanic acid was found on the dressing table, and a medicine glass which had contained the poison was standing on a pedestal by the side of the bed. He was fifty-five years of age, and had been educated in King's College, London. At one time he was house surgeon to the Great Northern Hospital, London, and was senior surgeon at the Burton Infirmary, with which he had been connected from its foundation.

BEQUESTS.—The late Miss Sophia Barwise of Sandringham House, Margate, bequeathed £100 to the Infirmary at Ramsgate.—Mr. B. Hammond, late of Bradford, left by his will £500 to the Bradford Infirmary.—The late Miss Elizabeth Mary Mimpriess of Davies-street, Berkeley-square, bequeathed the following legacies (free of duty)—namely, to the St. George's Hospital, £1000; to the Hospital for Consumption, Fulham-road, £50; to the Home for Incurable Children, Maida-vale, £100; to the Home for Crippled Girls, Marylebone-road, £100; to the All Saints' Convalescent Hospital, Eastbourne, £100; to the Gordon Hospital, Vauxhall Bridge-road, £500; to the Hospital for the Paralysed and Epileptic, Queen-square, £200; and to the Free Cancer Hospital, Fulham-road, £100.—The late Mr. C. Goding of Knightsbridge bequeathed £500 each to the St. George's and the Cancer Hospitals.—Mr. H. J. Baddeley, late of Sydenham, bequeathed £500 to the London Hospital.—Mrs. Eliza Ormrod, late of Wyersdale Park, Garstang, left by her will £1000 to the Albert Asylum, Lancaster.—Mr. James Carolan left £100 to each of the following institutions: Mater Misericordiae Hospital and Jervis-street Hospital, Dublin; and Mater Infirmitum Hospital, Belfast.—Mr. Henry C. Horner bequeathed £250 to the Hospital for Incurables and £250 to the Convalescent Home, Stillorgan.—The City of Dublin Hospital has received £500 under the will of the late Mr. J. Murland.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on September 16th, 1890.

Hospital.	Beds occupied.					Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	
Eastern Hospital	293	54	..	64	3	414
North-Western Hospital	320	35	..	20	1	376
Western	115	9	..	8	..	132
South-Western	153	..	..	..	..	153
South-Eastern	252	25	1	36	3	317
Northern	393	19	..	..	..	412
Totals	1526	142	1	128	7	1804

SMALL-POX.—Atlas hospital ship, 1.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BARTON, GEO., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Fulbeck District of the Newark Union.

BERNAU, H., M.R.C.S., L.R.C.P. Lond., has been appointed Second Assistant Medical Officer to the St. Marylebone Infirmary, vice N. Faichnie, resigned.

BIRKENHEAD, HAROLD, L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Surgeon to the Royal Infirmary, Wigan, vice Lomas, resigned.

BISHOP, WILLIAM, L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Cottage Homes of the Elham Union.

BLUETT, JOHN, M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Chesterfield.

CARTER, WELDON C., M.D. & L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Surgeon to the Royal Infirmary, Wigan, vice H. Birkenhead, M.R.C.S., L.R.C.P. Lond.

COOPER, WM., M.R.C.S., has been reappointed Medical Officer of Health for Widnes.

DUKE, ALLEN F., M.R.C.S. &c., late Senior House Surgeon to the Cheltenham General Hospital, has been appointed Resident Surgeon to the Branch Dispensary, Cheltenham, vice F. Mason, resigned.

EDRIDGE-GREEN, F. W., M.D., B.S., M.R.C.S., L.R.C.P. Lond., has been appointed Surgeon to the Shannon, Peninsular and Oriental Steamship Company.

ESSERY, WM. J., M.B. Durh., M.R.C.S., has been appointed Medical Officer for the Penryn District of the Falmouth Union, vice Rowley, resigned.

FARQUHARSON, W. F., M.B., C.M. Edin., late Assistant Medical Officer to the Cumberland and Westmoreland Counties' Asylum, has been appointed House Surgeon to the Dundee Royal Infirmary.

GODFREY, W. SIMPSON, M.R.C.S. &c., has been appointed Senior House Surgeon to the Cheltenham General Hospital, vice Allen F. Duke, resigned.

GREIG, DAVID M., M.B., C.M., F.R.C.S.E., has been appointed Demonstrator in the Anatomical Department of the University College Dundee.

HODGE, W. T., M.R.C.S., has been appointed Medical Officer for the Middle and Baschurch Districts of the Ellesmere Union, vice Corke, resigned.

HUBBARD, A. O., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon and Secretary to the Royal Isle of Wight Infirmary, vice B. C. Oldham, resigned.

LEIGH, WM. W., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Merthyr Tydvil and Treharris District of the Merthyr Tydvil Union.

MATTHEWS, HARRY E. HAMERTON, L.R.C.P.E., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the No. 9 District of the Chorlton Union, vice W. Clarence Matthews, M.R.C.S., L.M.R.C.S., & L.S.A., resigned.

PARRY-JONES, M., M.D. Lond., M.R.C.S., has been appointed Medical Officer for the Fifth District of the Mansfield Union.

PECK, E. G., M.A. Cantab., L.R.C.P. Edin., has been reappointed Medical Officer of Health to the Northwram Local Board.

REDMOND, THOS. O'CONNELL, L.R.C.S., L. & L.M. K.Q.C.P. Irel., has been appointed Medical Officer for the Midland Great Western Railway, Dublin District.

ROUSE, EUSEBIUS ROUSE, M.R.C.S., L.R.C.P. & L.S.A. Lond., has been appointed Assistant Medical Officer to Camberwell House Asylum, vice H. Martyn Eames, L.R.C.S. & P. Edin., resigned.

STOKES, ARTHUR S., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Weldon District of the Oundle Union, vice Pink.

WEATHERBE, LEWIS J., M.B., C.M., has been appointed Assistant House Surgeon to the Rotherham Hospital and Dispensary, vice W. G. Boase, M.R.C.S., L.R.C.P., resigned.

WEBBER, EDWARD S., M.B. Camb., M.R.C.S., has been appointed Medical Officer for the Sixth District of the Hollingbourn Union, vice McDougall, resigned.

WILKINSON, P. J., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Norton District of the Leek Union.

(In our announcement last week of the appointment of Mr. F. C. Larkin, the letters following the name should have been F.R.C.S., not M.R.C.S.)

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester-street, S.W.—House Surgeon. Board, lodging, and washing.

BETHLEM HOSPITAL.—Two Clinical Assistants for six months. Apartments, rations, and attendance.

BIRMINGHAM CITY ASYLUM, Rubery-hill, near Bromsgrove.—Clinical Assistant. No salary, but board and residence provided.

BIRMINGHAM GENERAL HOSPITAL.—Assistant House Surgeon for six months. Board, lodging, and washing.

BLITHING UNION, Halesworth, Suffolk.—Medical Officer for the Workhouse. Salary £50 per annum, exclusive of midwifery and vaccination fees. (Apply to Mr. C. White, the Clerk, Bulcamp.)

BOLTON INFIRMARY.—Junior House Surgeon. Salary £100 per annum.

CHELTEMHAM GENERAL HOSPITAL.—Junior House Surgeon. Salary £40 per annum, with board and apartments.

CLAYTON HOSPITAL, Wakefield.—House Surgeon; salary £90 per annum, with board, lodging, and washing. Also Junior House Surgeon, registered and unmarried; £25 per annum, with board, lodging, and washing.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, W.—Resident Medical Officer. Salary £50 a year, with board and rooms.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST AND THROAT, 26, Margaret-street, W.—One Physician-in-Ordinary; also one Surgeon.

MESSRS. GRUNING & Co., Liverpool.—A young Doctor for the Gold Coast (West Africa), to attend on the employes of a Gold Mining Company.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Two Examiners in Public Health. The present Examiners are eligible for re-election.

ROYAL SOUTH LONDON DISPENSARY, St. George's-road, Lambeth, S.E.—Surgeon to the Waterloo District. Honorarium £20 per annum.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, Newcastle-on-Tyne.—Demonstrator of Anatomy. Salary £100 per annum.

Births, Marriages, and Deaths.

BIRTHS.

- BRAIDWOOD.**—On Sept. 14th, at Shirehampton, Bristol, the wife of P. Murray Braidwood, M.D., of a daughter.
- BORROWMAN.**—On Sept. 11th, at Galle Face Cottages, Colombo, Ceylon, the wife of Philip Grierson Borrowman, M.B., C.M., of a son.
- HOSKYN.**—On Sept. 10th, at Ashley-avenue, Belfast, the wife of Donald T. Hoskyn, Surgeon, R.N., of a daughter.
- MARTIN.**—On Sept. 13th, at 10, Mansfield-street, Cavendish-square, W., the wife of Sidney Martin, M.D., of a son.
- PINCOTT.**—On Sept. 13th, at Calverley-parade, Tunbridge Wells, the wife of J. Cole Pincott, M.R.C.S., L.R.C.P., L.M., of a daughter.

MARRIAGES.

- BLACKBURN—SUTTON.**—On Sept. 10th, at Prince's-street Congregational Church, Norwich, Herbert Blackburn, L.R.C.P., L.R.C.S., second son of the late James Blackburn, C.E., of Calcutta, to Emily May, second daughter of Francis Sutton, F.I.C., F.C.S., of Norwich.
- CLARKE—HAYWARD.**—On Sept. 13th, at St. George's, Hanover-square W., Thomas Furze Clarke, M.R.C.S. &c., of Horsmans-place, Dartford, to Jessie Field, second daughter of John Camden Hayward, of Monk's Orchard, Wilmington.
- DUGON—GOODWIN.**—On Sept. 10th, at St. Alphege Church, Greenwich, Francis Dugon, M.R.C.S., F.R.C.P., of London, to Mary, only daughter of Henry Goodwin, Esq., of Burghley House, Blackheath-hill, S.E.
- GOODMAN—TINGEY.**—On Sept. 10th, at St. Peter's, Farnham, by the Rev. T. Dacre Chute, Thomas Herbert Goodman, M.R.C.S. &c., Hilgay, eldest son of Charles Goodman, of Sydenham, Kent, to Mary, third daughter of George Tinge, of Farnham, Norfolk.
- HENDERSON—LANE.**—On Sept. 13th, at St. George the Martyr, Queen's-square, W.C., by the Rev. H. Wesley Dennis, assisted by the Rev. Dacre Craven, George William Henderson, of London, to Mary Sophia Lane ("Sister Miriam"), of the Hospital for Sick Children, Great Ormond-street, W.C.
- PRALL—NORTON.**—On Aug. 30th, at West Malling, Kent, by the Rev. Harry Hayman, Vicar of Edwinstowe, Notts, cousin of the bride, assisted by the Rev. J. Timins, Vicar of West Malling, John Henniker Prall, M.R.C.S., L.R.C.P., of Bampton, Berks, second son of John Thomas Prall, of Eastgate, Rochester, to Lucy, eldest daughter of W. South Norton, of West Malling.
- SIDEBOTTOM—PARTINGTON.**—On Sept. 3rd, at St. James's, Whitfield, Glossop, Ralph Bennett Sidebottom, M.R.C.S., L.R.C.S., L.R.C.P., to Alice, eldest daughter of Edward Partington, Esq., J.P., of Glossop.
- SKELDING—WOOD.**—On Sept. 16th, at St. Margaret's Church, Leven, N.B., by the Rev. A. Thomson Grant, Incumbent, Henry Skelding, Esq., B.A., M.B. Camb., M.R.C.S. Lond., of St. Loyes, Bedford, second son of Joseph Skelding, Esq., M.R.C.S. of London, and Tenterden, Kent, to Marion Isabella, third daughter of the Rev. James Wood, of Buccleuch-place, Edinburgh, and of Brae Lodge, Largo, Fife, N.B.
- ST. LEGER—BRETT.**—On Sept. 16th, at the Parish Church, Watford, by the Rev. R. Lee James, D.C.L., Vicar, Robert Arthur St. Leger, M.B., C.M. Edin., fourth son of F. Y. St. Leger, Esq., Cape Town, to Annie Beatrice, third daughter of A. T. Brett, Esq., M.D., Watford House, Watford, Herts.
- STOTT—TOLSON.**—On Sept. 10th, at St. Mary's, Luddenden, by the Rev. J. S. Bateson, M.A., assisted by the Rev. H. Robinson, M.A., Frederick William Arthur Stott, B.A. Oxon., L.S.A. Lond., elder son of William J. Stott, M.D., of Deansgrove, Haslingden, to Mary Louisa, second daughter of Henry C. Tolson, Magson House, Luddendenfoot.
- WHICHER—D'ARCY.**—On Sept. 11th, at St. John's, Blackheath, James Charles Francis Whicher, Surgeon R.N., eldest son of the late James Whicher, M.D., Deputy Inspector-General R.N., to Isabella Frances, second daughter of the late Rev. Hyacinth D'Arcy, of Kiltullach House and Clifden Castle, co. Galway.

DEATHS.

- BARBER.**—On Sept. 15th, at 5, Hounsfield-road, Sheffield, Jonathan Barber, M.R.C.S., Consulting Surgeon to the Sheffield General Infirmary, in his 74th year.
- CLARKE.**—On Sept. 14th, at East Ferring House, Goring, Sussex, Vans Christian Clarke, M.D., M.R.C.P., R.N., some time Governor of H.M.'s Prison, Woking.
- FRENCH.**—On Sept. 10th, at Lansdown-place, Cheltenham, James French, M.R.C.P. Lond., formerly of Neath, Glamorganshire, in his 78th year.
- HUME.**—On Sunday, Sept. 7th, at Edinburgh, Surgeon-Major Thomas Hume, Indian Medical Service, Madras Presidency, aged 38 years. Friends will please receive this (the only) intimation.
- MODLIN.**—On Sept. 12th, at Shanklin, I.W., Robert Modlin, M.R.C.S., aged 61.
- SWINBURNE.**—On Sept. 14th, at Victoria-street, S.W., J. Digby M. Swinburne, Surgeon 19th Bengal Lancers, youngest son of Major-General J. D. Swinburne, aged 29.

BOOKS ETC. RECEIVED.

- ALLEN, W. H. & Co., Waterloo-place, London.**
Lessons on Health: containing the Elements of Physiology, and their Application to Hygiene. By Arthur Newsholme, M.D., D.P.H. Univ. Lond. 69 Illustrations. 1890. pp. 187.
- BLACK, ADAM & CHARLES, Edinburgh.**
The Collected Writings of Thomas De Quincey. New and Enlarged Edition. By David Masson. Vol. XI: Literary Theory and Criticism. 1890. pp. 474.
- BLACKIE & SON, Old Bailey, London.**
Blackie's Modern Cyclopedia of Universal Information. Edited by Charles Annandale, M.A., LL.D. Vol. VII: Pot—Ska. pp. 512.
- HEYWOOD, JOHN, Manchester and London.**
The Nurse's Guide to Massage. By Samuel Hyde, L.R.C.P., M.R.C.S. pp. 43. Price 1s. 6d.
The River Irwell and its Tributaries. By G. E. and A. R. Davis. pp. 96. Price 2s. 6d.
- HIRSCHWALD, AUGUST, Berlin.**
Diagnostik der Krankheiten der Verdauungsorgane. Von Dr. Hans Leo. Mit 28 Abbildungen. 1890. pp. 340.
- KEGAN PAUL, TRENCH, & Co., London.**
Air-Analysis: A Practical Treatise on the Examination of Air. With an Appendix of Illuminating Gas. By J. A. Wanklyn and W. J. Cooper. 1890. pp. 82.
- MARINE BIOLOGICAL ASSOCIATION, Plymouth.**
A Treatise on the Common Sole (*solea vulgaris*) considered both as an Organism and as a Commodity. Prepared for the Marine Biological Association of the United Kingdom, with plates, by J. T. Cunningham, M.A., F.R.S.E. 1890. pp. 147.
- OFFICE OF THE ASSOCIATION, Elizabeth-street, Sydney.**
Report of the First Meeting of the Australian Association for the Advancement of Science, held at Sydney, New South Wales, in August and September, 1888. Edited by A. Liversidge, M.A., F.R.S., and Robert Etheridge, jun.
- PERCIVAL & Co., King-street, Covent-garden, London.**
Influenza, or Epidemic Catarrhal Fever. A Historical Survey of Past Epidemics in Great Britain from 1510 to 1890. By E. Symes Thompson, M.D., F.R.C.P. 1890. pp. 490. Price 21s.
- POONA ORPHANAGE PRESS.**
The Students' Chemistry. In Two Volumes. Vol. I: Inorganic. Vol. II: Qualitative Analysis. pp. 414—63.
- PREUSS, J. A., Zurich.**
Handbook to the Health Resorts of Switzerland. By H. Loetscher, M.D. With Maps. Fourth Edition. 1890. pp. 311.
- SAMPSON LOW & Co., and EDWARD STANFORD, London.**
Madeira and the Canary Islands. A Practical and Complete Guide for the use of Invalids and Tourists. With 9 Maps. By A. S. Brown. Second Edition. pp. 130. Price 2s. 6d.
The Orient Line Guide. Edited by W. J. Loftie, B.A., F.S.A. Fourth Edition, revised. With Maps and Plans. pp. 360. Price 2s. 6d.
- SHAW & SONS, Fetter-lane, London.**
The Law relating to Medical Practitioners in England, as well in Private Practice as in Public Offices. By Jos. Craven, Barrister-at-law, assisted by T. Coppock, M.A., LL.B. Cantab. 1890. pp. 289. Price 7s. 6d.
- SWAN SONNENSCHNEIN & Co., Paternoster-square, London.**
A Household Dictionary of Medicine. By Frederick R. Walters, M.D. Lond. pp. 379.
- WHITING & Co., Sardinia-street, London.**
Ophthalmic Hints: Diagnosis and Treatment of Affections of the Eye commonly met with in General Practice. By A. St. Clair Buxton. 1890. pp. 51.

The Vagus Treatment of Cholera, as exemplified in returns from the Cholera Hospitals of Malta during the Epidemic of 1887; by A. Harkin, M.D., F.R.C.S. (Henry Renshaw, 356, Strand, London, 1890).—*Beiträge zur Augenheilkunde*; von Professor R. Deutschmann; Heft 1, mit 10 Abbildungen im Text (Leopold Voss, Hamburg und Leipzig, 1890).—*Zur Lehre von den Contagiosen Infektionskrankheiten*; von Dr. Ernst Reger; mit 63 lithographierten Tafeln (H. Kornfeld, Berlin, N.W., 1890).—*Recherches Cliniques et Thérapeutiques sur l'Épilepsie, l'Hystérie, et l'Idiotie*; par Dr. Bourneville, M. Sollier, et M. A. Pilliet; Vol. X. (Lecrosnier et Babé, Paris, 1890).—*Celiotomy*; This, and not Laparotomy, is the proper Greek synonym of "Abdominal Section," Laparotomy being an incision of the Flank only; by Robert P. Harris, A.M., M.D. Philadelphia (W. J. Dornan, Philadelphia, 1890).—*An Investigation into the Etiology of Phthisis*; by H. Gibbes, M.D., and E. L. Shurly, M.D.—*The British Columbia Medical Register, 1890* (Munro Miller, Johnson-street, Victoria, B.C.).—*Transactions of the American Dermatological Association at its annual meeting at Boston, Mass., September, 1889* (Stettiner, Lambert, & Co., New York).—*The Asclepiad*; by B. Ward Richardson, M.D., F.R.S.; No. 27, Vol. VII. (third quarter), 1890 (Longmans, Green, & Co., London); price 2s. 6d.—*De la Fiebre Amarilla*; por le Doctor M. Dagnino (Maracaibo, Tipografía de "Los Ecos del Zulia," 1888).—*Journal of the Leprosy Investigation Committee*; edited by P. S. Abraham, M.A., M.D.; No. 1, August, 1890 (Macmillan & Co., London); price 2s. 6d.—*Report of the Working Men's College, Melbourne*, for 1889 (Arnall & Jackson, Melbourne).—*Prostitution and Abolitionism*; Briefe von Dr. B. Tarnowsky (Leopold Voss, Hamburg und Leipzig, 1890).—*Handels-Berichte*; von Gehe & Co., in Dresden-Neustadt; September, 1890 (C. C. Meinhof & Sohn, Dresden).—*Grand Canary: its Climate and Springs*; by J. Cleasby Taylor, M.B. Edin., M.R.C.S. (J. Richardson & Co., Leicester).—*Should Hypnotism have a recognised place in ordinary Therapeutics?* by Norman Kerr, M.D., F.R.S. (H. K. Lewis, London); price 1s.—*Magazines for September*: Good Words, Sunday at Home, Leisure Hour, Sunday Magazine (Isbister), Boy's Own Paper, Girl's Own Paper (Religious Tract Society), Scribner's, Lippincott's.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Sept. 18th, 1890.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maxi- mum Temp. Shade.	Min. Temp.	Rain- fall.	Remarks at 8.30 A.M.
Sept. 12	30.29	N.E.	58	54	81	69	54	--	Hazy
" 13	30.26	N.W.	55	54	95	70	52	--	Foggy
" 14	30.27	N.E.	61	57	98	69	52	--	Hazy
" 15	30.13	S.W.	59	56	114	75	53	--	Bright
" 16	30.03	S.E.	62	58	116	78	56	--	Hazy
" 17	29.94	S.E.	62	58	110	75	58	--	Hazy
" 18	29.91	S.W.	62	60	110	68	60	.31	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication. We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

We cannot undertake to return MSS. not used.

MEDICAL BOOKKEEPING.

We have received the following replies to a correspondent who, in our last issue, expressed a desire to be informed of the best system of bookkeeping for a non-dispensing practice:—

W. W. H. writes: "In my opinion the 'A. B. C.' system of book-keeping introduced and supplied by Mr. B. Allsop, Shipley Times Office, Saltaire, Yorks, is the most convenient in existence. The books are kept with the least expenditure of time and labour."

Dr. W. Towers Smith suggests that Letts' or any other similar diary is perhaps as useful as any. Each day's visits are recorded in the usual way and at the end of the week summed up on one side of the sheet, and the payments are recorded in red on the other. No ledger is required, and it forms a complete record of work.

Dr. W. B. Brodie.—The National Vaccine Establishment is a Government institution, maintained at the public expense for the purpose of supplying medical practitioners with lymph; but it is not intended to do more than to give assistance from time to time by enabling them to vaccinate the first of a series of infants, and to cultivate the lymph they require for their own purposes.

NOCTURNAL ENURESIS.

To the Editors of THE LANCET.

SIRS,—Would any of your numerous readers kindly give me some hints as regards the successful treatment of the following case?

A little boy aged nine, robust and intelligent, the son of healthy parents, who has had the habit since birth of constantly voiding urine, night and day, wetting himself and clothes at all hours without giving notice. He can, if threatened with punishment, abstain from doing so during the day, but every night he "wets his bed." The boy looks the picture of health. The usual forms of treatment and management for such cases have been adopted. Circumcision was performed two years ago, but with no beneficial effect. Any hint for his future treatment will be thankfully received.

Sept. 13th, 1890.

I am, Sirs, yours faithfully,

SURGEON.

THE EFFECT OF DARKNESS ON NUTRITION.

THE *Medicinische Chirurgische Rundschau* reports an interesting communication by an ophthalmic surgeon, Dr. S. Klein, to the Medical Association of Vienna, on the effect of darkness in a case of retrolbulbar neuritis, in which, after the author had ordered treatment in the dark, marked increase of appetite and nutrition occurred, both of which had been previously much impaired. He confirmed this observation afterwards by a whole series of experiments, and consequently suggests treatment in the dark for cases in which it is desirable to increase the nutritioⁿ and appetite.

DISPENSING OF MEDICINES.

ON this subject T. Cameron, M.B., C.M. (Hull), sends us a communication, for the whole of which we are unable to find space. After quoting several passages from the address of Mr. Umney at Leeds, our correspondent submits the following proposals:—

"1. That a Bill be introduced into Parliament by our medical representatives there by which (to begin with the root of the evil) no medical man holding a registered diploma shall dispense or give out to patients in any way medicines which he may consider necessary for the treatment of such patients. An exception only to be made in such cases (a) as require immediate relief, when sufficient medicine for twenty-four hours' use may be given, but must not be renewed, except through a chemist by prescription; (b) where a chemist does not live within five miles of the patient; and (c) where medicines are administered by an operative procedure, such as hypodermic injection, application of medicated pessaries, injections, &c.—2. No chemist shall be allowed to suggest, prescribe, or in any way to influence any person in the choice of drugs; but he may, when asked specifically for any drug (other than those which are poisonous), dispense the same, when the name and special preparation of the drug must be written plainly on the label. If any medicine of a compound nature is asked for, the formula for the same must also be written plainly on the label. This rule also to apply to patent medicines, but the manufacturers of such patent medicines to continue to have the right of stamping their names on their preparations in such a manner as can be protected by registration. Before these compounds are registered they must be approved by medical officers appointed by the Local Government Board as being safe remedies in the hands of the public when they are not under the direct care of a medical practitioner.—3. A prescription only to be dispensed by a chemist when it is signed by a registered medical practitioner, who shall sign his name in full, with his address, in each case. When the chemist has dispensed the prescription, he shall also sign his name with his address. When so signed, the prescription is not to be dispensed again, either by the same or any other chemist, unless re-signed by the practitioner. A chemist to be held responsible if he dispenses a prescription signed by an unregistered person. A severe fine (say, £50) for each offence to be enforced both in the case of medical men and chemists. Further rules with regard to surgical appliances would have to be added. What constitutes a drug would also have to be specially defined."

Practitioners would, he holds, benefit by (1) increased practice arising from the total suppression of irregular practice, both as regards chemists and others, and (2) by the intolerable trouble and expense of dispensing being done away with; chemists, by their legitimate occupation being restored to them, and their false position as a species of quack removed; the public, by being thoroughly protected against injurious and dangerous drugs, whilst still leaving open to them in the most free manner the use of useful domestic remedies.

Mr. P. Butler-Stoney.—Our correspondent will find the subject which he mentions discussed generally in an annotation which appeared in our impression of last week. On the specific question put, we have no information beyond what is already public property. It does not appear to us that the present is a perfectly suitable time for discussing the question of nursing systems. That will be dealt with comprehensively when it can be treated with reference, not merely to one great hospital, but to a sufficient number of the great hospitals to afford adequate material for comparison and review.

THE COMPARATIVE DIETETIC VALUE OF NEW AND OF SKIMMED MILK.

To the Editors of THE LANCET.

SIRS,—Being much interested in an industrial school where there are 275 boys, to whom it is proposed to give a gill and a half of skimmed milk each day—not separated milk—instead of a gill of new milk, which they have been accustomed to receive, may I ask through your valuable columns whether such a change would be for the benefit of the boys, or otherwise? I have my doubts on the question.

I am, Sirs, yours faithfully,

Sept. 14th, 1890.

A. Z. A.

PARISIAN VAPORISER COMPANY.

IN our notice of this vaporiser in our last issue the address of the Company from whom the instrument may be obtained should have been given as St. Martin's House, 29, Ludgate-hill, E.C.

Mr. Andrew Hingston.—We think that in the circumstances described our correspondent's claim for additional travelling expenses was most reasonable. But it is difficult, perhaps impossible, to say precisely where the line should be drawn. The safest plan probably in a case where a medical man is asked to proceed to a distance for the purpose of examining a person for life assurance is to have beforehand a clear understanding with the agent who gives instructions as to a special allowance for travelling expenses.

Z. Y. X. may obtain assistance by consulting our advertising columns.

PROF. VIRCHOW ON THE CAT IN ANTIQUITY.

Was the cat, as a fireside pet, known to the ancients? If it was, was it as the domestic animal familiar to ourselves, or was it simply as a domesticated savage, like the monkey or the gazelle? Prof. Virchow inclines to the latter opinion. Having examined the mummies of Egyptian cats, he found they had no'bing in common with our feline friend. The cats of antiquity, according to other archaeologists, were slenderer than ours, and approached the weasel in appearance. But Signor Saglio, the distinguished Italian scholar who is engaged on the magnificent "Dictionary of Greek and Roman Antiquities" now in course of publication at Paris, under the editorship of Daremberg, read the other day before the Academy of Inscriptions a memoir on the subject, in which he holds a contrary opinion to that of Virchow. The cat in ancient times was, he maintains, the identical domestic animal known to modern Europe. On Etruscan tombs he has found paintings which represent the cat as a regular inmate of the house of the deceased, one of these pictures showing us a company at dinner, and the cat toying under the table with bones of chicken or partridge. Signor Saglio further refers Prof. Virchow to the British Museum, where on two water jars belonging to the fifth century B.C. domestic cats are depicted in a "Scuola di Musica." Of these cats one is held by a string and another stands upright on a footstool while a boy offers it a dainty. There are other pictorial representations, according to the accomplished Italian archaeologist, which prove that the cat was cherished in antiquity as one of the most useful, as well as graceful, domestic animals, inspiring the affection bestowed on it by eminent persons of all times—from Mahomet to Petrarch, from Montaigne to Hoffmann and Dumas.

S. Haigh will see that his communication, for which we are obliged, is referred to in another column.

Dr. W. R. Dix.—Barlow and Berry's article in Keating's Cyclopaedia of Diseases of Children.

DR. SCHWENINGER'S SANATORIUM AT HEIDELBERG.

To the Editors of THE LANCET.

SIRS,—Having lately spent nine days in the above dietetic and gymnastic Kur establishment, under the direction of a physician well known throughout Europe from his connexion with Prince Bismarck, perhaps a few details of the treatment may not be uninteresting or useless to the wide circle of your readers, lay and professional.

The institution stands on a most commanding site, 224 metres above sea level, and just beyond the romantic ruins of the old Castle of Heidelberg, with magnificent views of the valley of the Neckar and surrounding woods and mountains. The air is markedly purer and more bracing than in the town, which is not unaffected by occasional mists from the Neckar. The building is a very fine one, with terraces, garden, and other accessories, which make it a most eligible residence for the chronic invalid, and the walks in the neighbourhood are all that can be desired for picturesque beauty and interest. The bedrooms and public rooms and gymnasium are excellent, and all the arrangements, domestic and hygienic, as also the attendance and attention to the comfort of the patients, are exceptionally good, the cuisine, though simple, being particularly so, quite equal to that of high-class continental hotels. The only disadvantage, at least as I found it, is the steep climb from the town; indeed, in all directions the hills must be faced. But this, in most of the chronic ailments treated in the Sanatorium, is held to be an advantage, as part of the "cure." On admission the patient is subjected to a careful examination by the resident assistant surgeon, Dr. Badt. Dr. Schwenger himself, who resides at 100, Zimmerstrasse, Berlin, only pays periodical visits to Heidelberg, during which he has a conscientious consultation on every individual case. A paper of directions as regards food, exercise, and rest is handed to each inmate subsequently to the medical examination, the essential points of which, in my own case, are here appended:—6.30 A.M.: Rising; cold bath and free towel friction over the whole body. 7 A.M.: Staff and dumb-bell exercise for an hour, with frequent rests. 8 A.M.: Rest and gentle exercise. 8.30 A.M.: First breakfast (meat, eggs or milk). 9 A.M.: Work at the Zug apparatus. 9.30 A.M.: Rest and gentle exercise. 10 A.M.: A walk. 10.30 A.M.: Second breakfast (meat or fish and a glass of white wine). 11 A.M.: Work at the Ergostat (a kind of crank) for half an hour. At noon a walk, and at 1 P.M. dinner (meat, vegetables, and fruit compote). During the afternoon some additional gymnastic work is done, and at 7 P.M. supper of one dish of meat and fruit compote or salad, with a glass of white wine or, in some cases, beer. Meals, as a rule, are taken without drinking, fluids being only used some time afterwards; though in my own instance this rule was not insisted on. In many cases at 4.30 P.M. a slight additional meal is recommended, thus making four meals a day, which in my own case I found impracticable. Weight, strength, and chest-girth are tested weekly. Coffee, tea, soup, shell fruit (*Hülsenfrüchte*), potatoes, rice, and red wine are, as a rule, prohibited.

I may mention that the Sanatorium closes for the season on the 15th. Indeed, there are some doubts if it will be further continued, the premises being probably converted into a pension.

I am, Sirs, yours faithfully,

Heidelberg, Sept. 13th, 1890.

R. LEWINS, M.D.

THE STUDENTS' NUMBER.

Bristol Royal Infirmary.—We have been requested to add the following information to our reference to this infirmary on page 516 of our Students' Number. At the words "in weekly rotation," referring to the resident dressers, the words "free of expense" should be added. In the details regarding prizes the value of the midwifery prize is £3 3s., not £8 8s.

Fairplay.—The proposed arrangement does not appear to be illegal; but it seems to us to be a very unsatisfactory one, and not at all calculated to promote the public interest or the best interests of the institution. A hospital which makes exceptionally hard terms with its house surgeons is little likely to secure the best available men, nor is the adoption of arrangements which savour strongly of sweating a course which the judicious friends of a charitable institution should recommend in its interest.

"A CAUTION."

To the Editors of THE LANCET.

SIRS,—Since you were kind enough to insert my caution respecting a man calling himself "Dr. J. G. Davies" I have received letters from several medical men inquiring about him. He has since leaving me acted as *locum tenens* for two gentlemen I know of, and has caused a very great amount of unpleasantness in their practices. In the interest of the profession will you allow me to append a description of the man, as he has on each occasion changed his initials? He is an Indian by birth, of dark appearance, tall, of slight build, has a prepossessing manner, and is well over forty years of age.

I am, Sirs, yours truly,

Mile End-road, E., Sept. 13th, 1890.

W. F. GRANT, M.D.

To the Editors of THE LANCET.

SIRS,—My attention has been called to a letter under the above heading, in your issue of July 26th last, from Dr. W. F. Grant, concerning a man calling himself "Dr. J. G. Davies," who, falsely representing himself to be a qualified registered practitioner, applies for the post of *locum tenens*, and who produces several written testimonials. I wish to supplement that caution by stating that as his Christian name seems to vary, it may be advisable to state that he is an East Indian by birth, over forty years of age, and of spare frame. Unfortunately for myself, not having seen Dr. Grant's letter, I engaged a "Dr. G. Wm. Davies" to take charge of my practice for a few days; and as my suspicions were aroused on my return, I made inquiries, and found that he was the same individual. Both Dr. Grant and myself engaged him from the same address—20, Silver-street, Bloomsbury. Hoping that this letter will prevent others being taken in,

I am, Sirs, yours faithfully,

Old Ford-road, E., Sept. 16th, 1890.

F. T. BENNETT, M.R.C.S. &c.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Althaus, London; Dr. Prowse, Bristol; Dr. Lediard, Carlisle; Dr. M. Handfield Jones, London; Dr. T. Oliver, Newcastle-on-Tyne; Dr. Schaffer, New York; Mr. F. Treves; Dr. Paterson, Dundee; Messrs. Newbery and Sons, London; Dr. W. Fraser, Manchester; Mr. Connan, Tunbridge Wells; Dr. Thresh, Chelmsford; Dr. Drzewiecki, Krakow; Dr. Suffern, Worcester; Dr. Murrell, London; Dr. J. R. White; Messrs. Dawson and Sons, London; Mr. J. M. Sh'ah, Junagadh; Messrs. Maclehoose and Sons, Glasgow; Dr. Boucher, Hertford; Messrs. Dickinson and Co., London; Dr. Leggett, London; Messrs. Burroughs, Wellcome, and Co., Holborn; Mr. Butler-Stoney; Dr. Dix, Jarrow; Mr. Richmond Leigh, Plymouth; Mr. A. Winterbottom, London; Messrs. Yates and Sons, Worcester; Mrs. Fuller, Croydon; Messrs. Kegan Paul and Co., London; Mr. Lawrence Hamilton, London; Messrs. Eason and Son, Dublin; Mr. Hingston, Liskeard; Mr. Hurd, Guildford; Mr. B. Thornton, Margate; Mr. F. T. Bennett, London; Dr. H. Mackenzie, London; Dr. Morotti, London; Dr. C. Mercier; Dr. W. F. Grant, London; Dr. Yorke-Davies, Sherborne; Mr. H. Parrati, Rhyl; Mr. J. Murray, London; Mr. Manby, Wolverhampton; Mr. H. P. Hawkins, London; Mr. Alexander, Dundee; Mr. Martin, Blackburn; Mr. C. Wilkes, London; Mr. Williams, Cardiff; Mrs. Fa, Pyrmont; Mr. C. Hill, London; Dr. Sykes, Rotherham; Mr. Wood, Windsor; Mr. Cox, Herts; Mr. Campbell, Victoria; Mr. Barnett, Worcester; Dr. Ridge, Enfield; Dr. Freer, Birmingham; Miss Crowley, Ireland; Mr. Linton, Wolverhampton; Dr. MacAdam, Edinburgh; Mr. Joynson, Upton-Severn; Mrs. Osborn, Appleford; Mr. Winter, Calster; Mr. Huish, Clapham; Dr. Braidwood, Bristol; Dr. Spearing, Antrim; M. Charcot, Paris; Mr. Hodgson, London; Dr. Skerritt, Bristol; Messrs. Orridge and Co., London; Mr. Cornish, Manchester; Messrs. Blades, East, and Co., London; Mr. Moorhead, Carrington; Mr. Macdonald, Cockburnspath, N.B.; Mr. Morgan, Cleveland; Mr. Clark, Morpeth; Mr. C. Birchall, Liverpool; Dr. Whitaker, Edinburgh; Union Assurance Office, London; Justice, Fairplay; A Member of the Medical Staff of the Hospital; Secretary, School of Massage, London; Sanitary Engineering Co., Westminster; Surgeon; A. Z. A.; Matron, Greenwich Hospital; W. W. H.; E. Swansea; C. N., London; Sell's Advertising Agency, Limited, London; W. E. P., London; Secretary, Cheltenham

General Hospital; L. V., London; Zeta, London; Clerk, St. Asaph Union; Immediate, London; Belgrave, Newhaven; Secretary, Isle of Thanet Joint Hospital; Fides, Warwick; Editor, *Le Journal de Médecine*, Bruxelles; G. P., Middlesbrough; Beth, London; Church View, Burringham; D. W., Savannah, U.S.A.

LETTERS, each with enclosure, are also acknowledged from—Dr. Brown-Chard; Mr. Bullock, Southampton; Mr. Odell, Hertford; Mr. Hall, Hertford; Miss Osborn, Abingdon; Mr. Arnold, London; Mr. Gawn, Stockport; Mrs. Carson, Eastbourne; Mr. Young, London; Mr. J. Joyce, jun., Blackford; Mr. Purland, Woolwich; Messrs. R. Bentley and Son, London; Mr. O'Meara, Loughborough; Messrs. Brady and Martin, Newcastle-on-Tyne; Mr. Ehrmann, Southam; Messrs. Gale and Co., London; Mr. Baron, Manchester; Messrs. Clarke, Son, and Platt, London; Col. McLoughlin, Newcastle-on-Tyne; Messrs. Clapp and Son, Providence, R.I.; Dr. Letters, Kenmare; Mr. Evans, Maryport; Mr. Ward, Salisbury; Dr. Skardon, Dorset; Mr. Richards, Llanberis; Mr. Harris, Reigate; Mr. Stott, Haslingden; Mr. Harries, Llanelly; Mr. Clarke, Egremont; Mr. Dixey, Falmouth; Mr. Tully, Hastings; Mr. Thomas, Lambeth; Mr. Milnes, Litcham; Mr. Tyte, Minchinhampton; Mr. Mackintosh, Cuddine, N.B.; Mr. Woodroff, Reading; Mr. Moxon, Matlock; Mr. Warters, Alfreton; Mr. Dowell, London; Mr. Peacock, Watford; Mr. Davies, Glyncoed; Mr. Tasker, Sheffield; Mr. Rowlands, Merioneth; Dr. Martin, London; Mr. Pim, Langworth; Mr. St. Leger, Watford; Mr. Hewson, Notts; Mr. Orr, Manchester; Dr. Clark, Mottram; Dr. Evans, Festiniog; Dr. Wood, Pontypool; Mr. Brookes, Salop; Mr. Hall, Leominster; Mr. Neale, Sandown, I.W.; Mr. Heywood, Manchester; Messrs. Wright and Co., Bristol; Dr. Hughes, Ashton-under-Lyne; Mr. Nicholls, Bury St. Edmunds; Mr. Cartwright, Manchester; Mr. Lawrence, Stamford-hill; Mr. Cottingham, London; Mrs. Hume, London; Mr. Manthorpe, Rochester; Mr. Barber, Sheffield; Mr. Bonad, Cornwall; Dr. Purdie, Bethnal-green; Mr. Richards, Barmouth, N.W.; Mr. H. J. Holman, London; Dr. Coombs, Bedford; Mr. Gibson, Edinburgh; Mr. Wilson, Edinburgh; Mr. Smith, co. Down; Mr. Clapham, Halstead; Mr. Brook, Bloomsbury; Mr. Cochrane, Wigtonshire; Mr. Considine, Clare; Delta, London; J. X., London; Companion, Westmoreland; Canary Islands, London; L.A. Surgeon, London; R. D., Stockport; Hackney Furnishing Co.; Festino, London; J. L., Clare; Secretary, Merthyr General Hospital; Sigma, London; A. B. C., London; M.D., South Hampstead; Diplo, London; T. C., London; Secretary, St. John's Hospital, London; Matron, Carnarvon; R. T. R., London; Medicus, London; Sister, London; K. Q., London; W. J. A., London; Beta, London; Pyrmont, London; Medicus, Plymouth; W. H. W., Bradford; Bromum, Bristol; Medical Officer, Stronsay; M. R., Birkenhead; R. G., Blackpool; H., London; Opening, London; Robert, London; F. K., London; P., London; Medicus, Margate; Medical Officer, Mexborough; A. B. C., London; Mrs. H., Louth; Cerebrum, London; X. Y. Z., Wigan.

NEWSPAPERS.—Dundee Advertiser, Manchester Guardian, Newcastle Daily Chronicle, Pullen's Kent Argus, Indian Engineering, Kilkenny Journal, Islington Gazette, Sunday Times, Sheffield Daily Telegraph, Builder, West Middlesex Standard, Liverpool Daily Post, Windsor and Eton Gazette, Bristol Mercury, Devon Evening Express, Broad Arrow, Saturday Review, Hertfordshire Mercury, Architect, Courrier d'Alsace, Manchester Courier, Oldham Standard, Law Journal, Leeds Mercury, Chemist and Druggist, Metropolitan, Spectator, Guy's Hospital Gazette, Reading Mercury, Weekly Free Press and Aberdeen Herald, Windsor and Eton Express, Local Government Chronicle, Civil Service Guardian, Pharmaceutical Journal, City Press, Surrey Advertiser, North British Daily Mail, South Wales Daily News, Commonwealth, Sussex Daily News, Scotsman, Yorkshire Post, Hull News, Wiltshire County Express, Irish Times, West Middlesex Advertiser, Durham Chronicle, Norfolk Standard, Indian Medical Gazette, North Wales Observer, Sunderland Herald, Scottish Leader, Liverpool Courier, Carlisle Journal, Fulham Advertiser, Darwen Post, Overland Mail, Dartford Express, Building News, Sunderland Daily Echo, North Cumberland Reformer, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 22.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operation daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30 P.M.
ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPEDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

Tuesday, September 23.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electrotherapeutics, same day, 2 P.M.

Wednesday, September 24.

NATIONAL ORTHOPEDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, September 25.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

Friday, September 26.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, September 27.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

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