have already pointed out that the virus of this disorder may do good in epilepsy and mental affections, and it has been known to act similarly in other disorders. Féré¹⁴ refers to its good effect in affections of the eye, including leprosy, trachoma, irido-choroiditis, and orbital tumours. Jonathan Hutchinson¹⁵ has seen nasal polypus, Schwimmer¹⁶ cicatricial keloid, and Terret¹⁷ callus rapidly absorbed under its influence, while Solles¹⁸ and Chelmowski¹⁹ bring forward evidence to show that it is serviceable in tuberculosis. The curative effect of erysipelas on lupus appears to be a matter of common observation. Lastly, I would refer to its remarkable influence on acute yellow atrophy of the liver, a striking instance of which was cited by Dr. Joseph Dulberg, of Manchester, in answer to a letter of mine published in the BRITISH MEDICAL JOURNAL,²⁰ as occurring in the practice of Professor Leube, of Würzburg. It strongly suggests the advisability of trying Coley's fluid in cases of this kind.

(e) The poison of influenza appears to have potent curative effects. It has apparently cured a case of gonorrhoeal cystitis;²¹ and Dr. Shirliff²² of Malvern, has recorded the similar cure of a lady, aged about 60, who for some time had been under his treatment for chronic catarrh of the upper respiratory tract. "On the very day influenza came on the catarrh suddenly and completely ceased," and had not returned when the patient was seen five weeks afterwards. Mr. W. M. Scott,²³ M.R.C.V.S. has seen an opacity in the cornea of a horse disappear under the influence of influenza; but perhaps the most remarkable instance of the curative influence of this disease is that related to the Brixton Medical Society by Dr. Knight:

A lady, aged 45, suffering from malignant disease of the liver, contracted influenza, and was so ill that she made her will, and Dr. Knight thought she would die. But from that time onward the liver shrank, and the patient seemed to get quite well. The tumour, however, returned in eighteen months, and the patient eventually died.

(f) The influence of vaccination in curing disease requires some mention here. It has been thought to protect against influenza,²⁴ and has been used in the treatment of pulmonary tuberculosis.²⁵ There is no doubt that it acts beneficially in whooping-cough,²⁶ and certain chronic affections of the skin, a fact pointed out by Sir James Grant²⁷ as early as 1863, as well as by other observers. Dr. Milson, of Lampstead, regards the presence of eczema as an argument for, rather than against, vaccination; and Dr. Mutch, of Brixton, has seen obstinate eczema clear up after it.

5. I now propose to record a few miscellaneous cases showing the same beneficial action of disease.

Case of Chronic Rheumatism Disappearing upon the Supervention of Cancer.—A woman in early life had two attacks of rheumatic fever, which left her a martyr to "chronic rheumatism." When 58 she manifested unmistakable signs of malignant disease of the liver, and ever after all signs of joint trouble completely disappeared.

Case of Paralysis Agitans removed by Hemiplegia (communicated by Mr. C. H. Fowler, Potter's Bar).—A farm labourer, aged 73, had, until two years ago, suffered from paralysis agitans for a period of twenty years. It was of a very severe type, affecting the head, arms, and lower extremities, and quite diagnosable a considerable distance away. Two years ago he had an attack of right hemiplegia (probably embolic), and it was immediately noticed that the tremor had quite ceased, not only on the affected side, but bilaterally. From this attack he made a good recovery, and his tremor has not returned.

Case of Migraine removed by an Acute Auditory Affection.—The patient—Dr. T. Reuel Atkinson, of Sherborne—himself published the case in the *Lancet*, August 27th, 1892, and the following facts have been kindly communicated to me by him. "In 1891 I lost the partial hearing in my right ear, and in April, 1892, this was followed by an almost total loss of hearing in my left ear. Before that I had for as long as I can remember suffered from attacks of periodic sick headache, and constipation more or less. Since losing my hearing I have had no constipation and no migraine." In a second letter Dr. Atkinson writes: "I am unable to tell you much about the nature of my deafness; the mischief is in the internal ear, and that is almost all I know about it. As to the cause I am quite in the dark. I can but surmise that it may have followed upon an unrecognised influenza. I am absolutely free from headache now. Formerly I never went a month without one, and rarely a fortnight, and when I had a headache it usually lasted all day till the evening. The headaches were usually accompanied with vomiting, but now I am never sick nor sorry."

Two Cases of Diabetes apparently Cured by the Occurrence of Cancer. (Communicated by Mr. W. A. Easte, Hanslope, Bucks.)—A man was thrown out of a cart, and diabetes set in and lasted from four to five years, when the symptoms of diabetes abated, the sugar almost entirely disappearing from the urine. Shortly after this he died, the post-mortem examination revealing cancer of the stomach. The other case was that of a woman, about 45 years of age, whom Mr. Easte had been attending during some years for diabetes. The patient developed malignant disease of the rectum, and since the discovery of this all the symptoms of diabetes have been absent.

Here I must end a very inadequate paper on a very important subject. It has, however, one merit—that of being

the first attempt (so far as I know) to deal with this subject in anything like a systematic and comprehensive manner. I earnestly hope my remarks will do something to stimulate inquiry in the direction indicated. The inducements are great. Already observation of the curative action of erysipelas has given a clue to treatment, with brilliant results; and who knows but that we may discover other clues which shall help us to still greater achievements? I am sanguine enough to believe we shall.

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SPASMODIC STRICTURE OF THE CARDIAC ORIFICE OF THE STOMACH.*

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THIS disease, which is also known by the name of cardio-spasm, may be defined as a spasmodic contraction of the cardiac orifice of the stomach and of the lower end of the oesophagus occurring independently of any organic lesion.

Etiology.—(1) A mild form of the complaint is frequently encountered in emotional and anæmic women between the ages of 18 and 30. In some cases it makes its appearance coincidently with the establishment of the catamenial functions and reappears at each menstrual epoch for several months. Occasionally the disorder commences at the climacteric, and may then persist with periodic intermissions for a considerable time. Anger, fright, or any other sudden and severe emotion occurring in a neurasthenic or hysterical individual is also apt to provoke a temporary attack. (2) Irritation of one of the abdominal viscera sometimes appears to be responsible for the development of the disease. Thus, spasmodic dysphagia occasionally accompanies or even replaces the vomiting of early pregnancy, and is by no means an uncommon symptom in painful affections of the uterus or its appendages. In children of an excitable disposition the presence of thread worms may likewise induce an attack. (3) Catarrhal and other affections of the oesophagus, associated with hyperæsthesia of the mucous membrane, are often accompanied by spasm of its muscular coat. Thus, in a case of chronic dysphagia which recently came under my notice a necropsy revealed the existence of a simple chronic ulcer at the lower extremity of the oesophagus, which, although it involved the cardiac orifice of the stomach, had not occasioned any perceptible degree of stenosis. Nevertheless it was obvious from the contracted state of the stomach and the marked dilatation of the lower 5 inches of the oesophagus that almost complete occlusion of the cardia must have existed during life. Slight injuries to the oesophagus, such as those inflicted by swallowing a pin or a fish bone, may induce a severe attack of spasmodic dysphagia in a nervous or debilitated subject. In such cases, however, the seat of the obstruction is more often in the upper or middle third of the tube than at its lower end. (4) Habitual drunkards are very liable to the complaint, especially after

* Abstract of a Lecture delivered at the London Temperance Hospital on February 10th, 1898.

indulgence in an unusually deep debauch. In many of these cases a bougie is only arrested in the immediate neighbourhood of the stomach, but in others the obstruction is encountered just below the pharynx. (5) Organic diseases of the stomach and other organs are occasionally accompanied by spasmodic occlusion of the upper orifice of the stomach. Thus Poncet¹ observed a case where gastrostomy was performed for stricture of the œsophagus. After death, however, that tube was found to be perfectly healthy, while the pylorus was the seat of a cancerous growth. Somewhat similar cases have been recorded by Ewald² and Osgood.³ One of the best examples of cardiospasm I have ever seen occurred in a highly neurotic youth, who was the subject of acute phthisis, and Bouveret⁴ also records an example of the association of these two diseases. (6) Lastly, an insidious and chronic type of the complaint occasionally develops either without obvious cause, or appears to follow some slight injury to the head or spine, or an acute febrile disease.

SYMPTOMS.

Spasmodic stricture of the cardiac orifice may present itself either as an acute or as a chronic disease. The former variety is chiefly encountered in young and neurotic individuals, and is especially common in women. In typical cases four distinct symptoms may be observed to follow each other in fairly regular sequence, namely, dysphagia, pain at the chest, regurgitation of the food, and flatulent distension of the stomach.

1. *Dysphagia*.—Difficulty of swallowing constitutes the most characteristic feature of the complaint. In mild cases each mouthful of food appears to be temporarily arrested behind the lower end of the sternum, and a second effort at deglutition is required to overcome the obstruction. In other instances the patient is obliged to drink a little water before each mouthful of food, while in the most severe cases the diet has to be composed entirely of liquids. In rare cases every attempt to swallow gives rise to intense spasm of the œsophagus and pharynx, which renders the administration of food by the mouth impossible, and may even simulate hydrophobia.⁵ One of the chief characteristics of this form of dysphagia is its tendency to vary in severity from day to day, and even from meal to meal. The symptom is always most marked after midday, and may appear only at supper time. Excitement, fatigue, or any slight indisposition invariably increases the difficulty of swallowing, but if the patient's attention is distracted from her complaint, the ingestion of the food is often accomplished without discomfort.

2. *Pain*.—The temporary arrest of the food in the œsophagus is always accompanied by a sense of fullness or oppression behind the lower end of the sternum, which disappears as soon as the bolus has entered the stomach. In some cases, however, the process of deglutition is accompanied by genuine pain, which is probably due to a hyperæsthetic condition of the mucous membrane of the œsophagus. In these cases a feeling of intense soreness is experienced on swallowing, which extends down the chest behind the sternum, and upwards along the throat to the ear. Occasionally the pain is chiefly felt in the neck and between the shoulders. The suffering is always most intense after the ingestion of solid food, but it also follows the use of hot or cold drinks, and may persist for some time after a meal. As a rule, the pain ensues at the commencement of each meal, and the knowledge of the suffering which will be experienced may deter the patient from eating, and thereby induce serious loss of flesh. In other instances the symptom develops quite suddenly in the intervals between the meals, the swallowing of a little saliva being sufficient to excite intense pain in the throat and ear.

3. *Regurgitation* of food, or œsophageal vomiting, only occurs in a comparatively small proportion of the cases. It is extremely capricious in its onset, and is quite as often excited by liquid as by solid food. The emesis usually takes place during the progress of the meal, and tends to relieve the sense of oppression at the chest which results from the temporary arrest of the food in the œsophagus. It is worthy of notice that certain articles of diet are habitually rejected, while others of a less digestible nature are often retained. The attack occurs quite suddenly, either immediately after the food has been swallowed or as soon as the patient rises from

table at the end of the repast, and is neither preceded by nausea nor accompanied by straining. After the patient has been sick she will often partake of more food without any discomfort. The vomited material presents no signs of digestion, is neutral or alkaline in reaction, and is largely mixed with saliva and mucus.

4. *Gaseous distension* of the stomach arises from the accumulation of atmospheric air, which has been swallowed during the meal, and is unable to escape from the organ owing to the closure of the cardiac orifice. This ballooning of the stomach pushes up the left side of the diaphragm, and induces a series of secondary phenomena of some importance. The first symptom of this condition is a sense of intense fullness and oppression at the chest, which often culminates in an attack of severe pain in the vicinity of the xiphoid cartilage. Occasionally the left side of the chest is the chief seat of the suffering, or a stabbing pain is experienced through the dorsal spine. In most cases these abnormal sensations are accompanied by dyspnoea, palpitation, and a quick, feeble, or irregular pulse. In severe cases the face becomes cyanosed, and the patient experiences the fear of impending dissolution. On examination the epigastrium is found to be distended and tympanitic on percussion, while the upper border of the stomach may reach as high as the fourth rib on the left side. These several phenomena seldom last more than half an hour, and disappear quite suddenly after the eructation of a large quantity of inodorous gas.

Notwithstanding the obstacles which exist to the maintenance of nutrition, loss of flesh is seldom a noticeable feature of the complaint; indeed fatal exhaustion from this cause has rarely occurred. As a rule the appetite continues good, but when the spasmodic affection is associated with hyperæsthesia of the mucous membrane of the œsophagus the patient may be deterred from eating on account of the pain. Anæmia is almost always present, and a permanent cure can seldom be effected until the condition of the blood has been improved. Among the minor symptoms of the complaint headache, amenorrhœa, constipation, and emotional disturbances are frequently encountered.

Chronic spasm of the cardiac orifice occurring independently of any organic lesion is a rare but extremely interesting disease. In most of the recorded cases (Meltzer,⁶ Einhorn,⁷ Maybaum,⁸ Leichtenstern⁹) the first symptoms appeared in early life, and were referred by the patient to a slight blow on the back, or to some trifling indisposition. When once the complaint has become established it endures throughout life. The symptoms which attend this variety of cardiospasm are very similar to those already described, namely, dysphagia, with pain and oppression at the chest. In addition to these the patient gradually loses flesh and energy, and becomes greatly despondent about his condition.

One of the chief points of interest in these cases lies in the fact that instead of vomiting the food the patient acquires the knack of forcing it into his stomach by muscular effort. Thus, after swallowing several mouthfuls of food in rapid succession, the patient may be observed to take a deep inspiration and then to make a forcible expiratory effort with the glottis closed and the elbows firmly pressed against the sides of the chest. This manœuvre is repeated at short intervals during the meal until most of the food has been squeezed into the stomach.

The explanation of this curious phenomenon is to be found in the dilatation of the thoracic portion of the œsophagus which invariably results from chronic obstruction of the cardiac orifice, and which consequently forms a kind of first stomach or thoracic reservoir for the food. As soon as this sac has been partially filled a sudden rise of the intra-thoracic pressure brought about in the manner described is sufficient to force a portion of its contents through the cardiac orifice. This dilatation of the œsophagus occurring independently of an organic stricture has not only been observed on the *post-mortem* table, but can be readily demonstrated during life in the following manner: In the early morning the patient is given a cup of tea, and prohibited from indulging in any forced efforts of deglutition. About half an hour later a soft tube is passed down the œsophagus until its point becomes arrested (about 40 to 48 cm. from the front teeth), when the greater part of the tea can be evacuated. After a little manipulation it is usually

possible to pass the tube into the stomach and to extract the remainder. The first portion removed is neutral in reaction and turpid from admixture with mucus and food *débris*, while the rest is usually acid. If a test breakfast is employed and the tube passed one hour afterwards, the material extracted from the œsophagus is found to vary in amount from 20 to 60 c.cm., and presents no signs of digestion, while that removed from the stomach exhibits the ordinary characters of semi-digested food, and contains free hydrochloric acid. It is also possible to wash out the dilated œsophagus without any of the fluid passing into the stomach, and a rough estimate may be made of the capacity of the tube by measuring the quantity of fluid it will accommodate. In some of the recorded cases from 150 to 300 c.cm. of water were easily retained in the dilated œsophagus.

Meltzer has drawn attention to the fact that if air is pumped into the stomach, the organ can be completely distended without any escape of gas through the cardiac orifice. This fact seems to favour the assumption that the circular muscle whose function it is to close the aperture is affected with a tonic spasm. On the other hand it has already been observed that however great may be the difficulty of deglutition, there seldom exists much difficulty in passing a tube through the supposititious stenosis. It is, therefore, quite as reasonable to suppose that the dysphagia and subsequent dilatation of the œsophagus may be dependent upon paralysis of the longitudinal fibres of the œsophagus which dilate the cardiac orifice as to imagine a long continued spasm of their antagonists. It is also worthy of notice that it is impossible in these cases to produce reflex vomiting by irritation of the pharynx.

DIAGNOSIS.

The recognition of the acute variety of the disease is seldom attended by any difficulty. The sudden onset of dysphagia, which varies in severity from day to day, and its intimate association with other symptoms of a hysterical nature indicate at once its nervous origin; while the early age of the patient and the absence of a permanent local obstruction to the passage of a bougie are sufficient to eliminate the possibility of an organic stricture of the œsophagus. Chronic cardiospasm in its early stages may easily be confounded with cancerous stenosis or compression of the œsophagus by a diverticulum. It is to be observed, however, that cancer is more common in men than in women, and is rarely encountered before the age of 45. The symptoms commence insidiously, but the dysphagia steadily increases until the patient can only swallow liquids with difficulty, while most of the food is regurgitated. He also rapidly loses flesh and strength, and soon presents the characteristic cachexia. Exploration with a tube reveals an obstruction at one spot in the œsophagus, which can only be surmounted by the use of an instrument of suitable calibre. Hæmorrhage from ulceration of the malignant growth is not infrequently observed, especially after direct exploration. The œsophagus seldom exhibits any marked evidence of dilatation above the stricture, and at most a few drachms of turbid saliva can be evacuated. Cardiospasm, on the other hand, occurs at an early period of life, and seems to be as common in women as in men. The dysphagia develops gradually and never becomes complete, since the patient acquires the habit of forcing the food into the stomach in the manner described. Vomiting seldom occurs, and rapid emaciation, hæmatemesis, and cachexia are never observed. Exploration with a tube demonstrates that the apparent stricture can be traversed without difficulty, while the œsophagus itself is greatly dilated, and capable of containing a considerable quantity of food. The disease lasts for many years; and, if the patient is properly fed, does not directly curtail the period of life.

The symptoms which arise from the presence of a pressure pouch of the œsophagus usually develop about middle age, and consist of dysphagia and regurgitation of food. As the diverticulum increases in size a swelling of the neck may be observed after eating or drinking, and the application of external pressure will force some of its contents into the mouth. If a tube is inserted into the throat, its tip is apt to enter the pouch and to become arrested at a distance of 6 or 7 inches from the incisor teeth. With a little manipulation the ab-

sence of a stricture or dilatation of the œsophagus can easily be determined.

TREATMENT.

In every case measures should be adopted with a view of improving the general health. Daily exercise in the open air, with some healthy mental occupation, are indispensable to the successful treatment of hysterical and neurasthenic cases. The food should be moderate in quantity and plain in quality, and in severe cases a milk diet, with rest in bed, should be enforced for a few days. If anemia is a marked symptom, iron, quinine, valerianate of zinc, or phosphate of manganese should be employed, care being taken to secure an efficient daily action of the bowels. Subcutaneous injections of atropine have been recommended for cases of general spasm of the muscles of deglutition, combined with hyperæsthesia of the mucous membrane of the œsophagus. The measure which meets with the greatest amount of success is the introduction of a full-sized bougie into the stomach each day, the instrument being allowed to remain in the œsophagus for five minutes on each occasion. Occasionally this procedure is accompanied by a considerable amount of pain, so that it is advisable either to allow the patient to suck a few cocaine lozenges prior to the operation, or to smear the lower part of the instrument with cacao butter containing about 5 per cent. of the hydrochlorate of cocaine. In cases of chronic cardiospasm the nutrition should be maintained by teaching the patient to feed himself through a tube. The dilated œsophagus should be washed out each day or after each meal if the patient swallows his food, and internal faradisation of the cardiac sphincter may be practised with a suitable electrode. In severe cases it may be necessary to perform gastrostomy.

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CASES OF CEREBRAL ABSCESS IN CONNECTION WITH CHRONIC SUPPURATIVE MIDDLE-EAR DISEASE.

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DURING the last ten years great progress has been made in the surgical treatment of brain abscess caused by purulent inflammation of the middle ear. At least 60 cases of cerebral and 12 of cerebellar abscess have been successfully operated upon and recorded, and many unsuccessful, but none the less instructive, cases have been published.

There is no doubt that deaths still occur undiagnosed, both because the attention of the medical attendant is not drawn to the aural condition from its supposed trivial importance, by either the patient or his friends, and because the symptoms are often indefinite and often latent for long periods. Large encapsulated abscesses have been found during *post-mortem* examinations which must have existed for months, if not years, and which during life gave rise to no serious symptoms, and were therefore never suspected. An interesting case is recorded by Dr. Barr of a young man who, during his holiday, was climbing hills in the West of Scotland at the time of the first onset of acute symptoms. He died in a fortnight, and Professor Coats believed from examination of the lining membrane that the abscess had existed many months. Even when attention is especially directed to the possibility of an abscess, the difficulty of diagnosing an uncomplicated case in the early stages is often great, and is forcibly shown in a valuable paper by Godlee on Two Cases of Middle-ear Disease in vol. ii of *International Clinics*. He has compiled tables showing the most characteristic symptoms which may be feared or expected as consequences of chronic purulent inflammation of the middle ear, namely, mastoid suppuration, lateral sinus thrombosis, septic meningitis, and cerebral abscess. These symptoms are over sixty in number, and it is evidently difficult to reduce them to more reasonable bounds without impairing their accuracy.