(articulation) was affected at times; the tongue felt too big for the mouth, and she talked thickly. At times she was not able to speak. There was great depression of spirits. Bowels regular; appetite good.

The treatment was continued, and from this time she improved. On July 6th, she had no agitation of the limbs at all; but occasionally the mouth was affected. She now ceased to attend.

CASE IX. Left Hemichorea, becoming slightly bilateral: Tumour of Spinal Cord: Disease of Suprarenal Capsules.—This case is referred to by Dr. Chambers in his *Clinical Lectures*, and I have given a brief account of the points of interest in the *Pathological Transactions*; but the details have never been published. H. M., aged 23, a needlewoman, was admitted into St. Mary's Hospital on November 1st, 1861, under the care of Dr. Chambers. She had never had acute rheumatism; had always been healthy, but not strong, liable to headaches, and subject to dysmenorrhœa. Two years previously, she had been disappointed in love, and had felt it greatly. She had become low and despondent, subject to headaches, and her friends had noticed that she was becoming brown.

The present illness began with headache and giddiness. She was turning round one day, when she suddenly fell down, not unconscious, but unable to rise. She called for assistance, was got to bed, and there remained for a fortnight. She suffered from pains in different parts of the body and limbs, vomited after every kind of food, and from the first was unable to keep the left hand still; it felt numb also, and she could not grasp anything with it. Very soon, movements were noticed in the left leg.

When she had been out of bed a week, she went on a visit to her sister. The omnibus journey (from Islington to St. John's Wood) fatigued her greatly. She became gradually worse, the head being jerked about, and the limbs feeling as if they would drop off.

When I first approached her, she was quiet; but, during my examination, the eyes twitched about; the head moved; the forehead was wrinkled; the mouth was distorted; the jaw was in action; and the left arm and leg were much agitated, the right limbs only slightly. The movements were said to be greater during sleep, or when dozing, than when awake. Speech was difficult and hesitating. Her memory was apparently not good; but she gave her history in much greater detail than is here set down, except about the love affair, which she confided to a patient. The pulse was 110. The heart-sounds were weak and sharp; there was no murmur. The skin was browned to a degree sufficient to attract my attention, and to be noted, but not exciting any suspicion of Addison's disease.

As she became worse, the mental faculties were affected. On November 8th, she was restless in the night; fell out of bed twice; attacked the nurse, bit and struck her. She refused food, and asked petulantly to be let alone. There were movements in the left limbs only, not violent.

Nov. 9th. She lay on her back, taking no notice, apparently asleep, but occasionally opening her eyes and looking round. The left arm and leg seemed to move under the clothes; the right arm was lying on the pillow, quiet. She refused to put out her tongue, and made faces when asked. The pupils were contracted and sluggish. The extremities were cold. She died during the following night.

POST MORTEM APPEARANCES.—There were scattered tubercles under the pleura at the apices of both lungs. The heart was healthy. The suprarenal capsules were large, yellow, nodulated, exhibiting the changes characteristic of advanced Addison's disease. The brain was healthy, as to naked-eye appearances and consistence. A tumour of the size of a haricot bean was found on the posterior aspect of the dorsal part of the spinal cord, about two inches above the lumbar enlargement; it consisted of nerve-fibres, connective tissue, and vessels radiating from near the axis of the cord.

[To be concluded.]

GRATUITOUS MEDICAL ADVICE IN CHINA.—The gratuitous distribution of medicine is quite common in China. In the summer especially, certain remedies much prized by the people may be obtained free of charge from societies which include this among other objects for which they are instituted. There is a very common mode of practising the healing art, professedly from benevolent motives, in which a selfish motive is too apparent. Notices may continually be seen placarded in public places, calling the attention of the public to some distinguished personage of the *Æsculapian* school who has learned his art at the capital, or from some foreigner, or from some distinguished native practitioner, or by communication with the *genii*, who is desirous of relieving those who are in a condition of suffering and distress, and will give them an opportunity to avail themselves of his knowledge and skill without charge, except for the cost of medicine.—Nevins's *China and the Chinese*.

REMARKABLE SPECIMEN OF DISEASE IN BONE.

By GEORGE F. ELLIOTT, M.D.,

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THE accompanying photograph represents a portion of the humerus of a patient who died recently in the Hull Infirmary from the results of advanced renal degeneration. He was also the subject of constitutional syphilis; and, during his stay in hospital, suffered from fracture of the bone, from which the specimen is taken. The history is as follows. The man was about thirty-six years of age, and by occupation a groom. Primary syphilis, contracted seven years ago, was followed by a copious rupial eruption, and nodes on the tibiæ. Albuminuria was known to have existed about eighteen months before his death. About a month after his admission as an in-patient, his attention was called to a change in shape of the upper part of the right arm; at first sight, the bone appeared as if bent, but manipulation left no doubt as to the existence of a fracture, the seat of which was just above the insertion of the deltoid. There was no history of any violence inflicted on the part either before or after his admission; and the actual moment of the occurrence of the fracture appeared to be unknown to

Fig. 1.—Outer surface of section. *a, b, c.* Openings leading into medullary canal.

him. Union was supposed to be perfect about two months after the injury was noticed. A liability to fracture has long been looked upon as one of the effects of syphilis upon the bones; but though such a condition, as Mr. Holmes says, "apart from ulceration and the separation of necrosed portions," is doubted by some, as I have, within a few years, seen two other cases of fracture occurring, upon the application of slight force, in syphilitic subjects without any symptom of ulceration or necrosis, I looked upon this as a similar case. The man died about seven months after the fracture took place; and as it is seldom, I fancy, that an opportunity occurs for a *post mortem* examination of a fracture of this sort, I had the portion of bone removed.

When the soft parts were detached by maceration, a very remarkable condition was disclosed. Upon the anterior surface of the bone, three large openings were found leading into what had been the medullary cavity; this canal was almost blocked up by bony deposit, towards

Fig. 2.—Internal surface of section. *a.* Line of fracture. *b, b, b.* Position of openings internally. *c.* New bone at outer extremity of fracture.

the ends of the section; but, curiously enough, less so immediately opposite the fracture. The edges of the centre opening were rounded, and the periosteum was continued over them. The other openings were apparently more recent, and more nearly resembled the condition of ulcerated bone. The fracture was perfectly transverse; but, although some new bone had been deposited at the outer margin, it could be seen, when the parts were in a moist state, that the union was only fibrous.

The question is, Under what condition were these openings formed? It must be borne in mind that the man did not complain of pain in the part at any time; that there never was anything to indicate the existence of an abscess in the neighbourhood; and that *there was no sinus through which any portions of dead bone could have been discharged*. Apart from pressure, I am not aware of any condition under which bone comes to be simply absorbed; and if the loss of substance in the present case were due to ulceration, the silent way, so to speak, in which the removal was effected, is certainly very remarkable.

Through the kindness of Dr. Thorowgood, I am enabled to add the result of a microscopical examination of the specimen made by Dr. Sedgwick, for the Medical Society of London, since the above was written.

On section, both longitudinal and transverse, the bone is seen to be tunnelled in all directions. The tunnels vary in size, are very tortuous, and communicate freely with each other. They contain some fatty matter, and granular and other debris; part of which is soluble with effervescence in nitric acid, and another part is soluble in acetic acid; but, as the bone has been macerated and dried, a complete examination of the contents of the tunnels is impossible. The bone is whiter in some parts than others—chiefly on the outside. In the whiter portions, the tunnels are smaller in size, and the debris is not so copious as in the darker portions. In many parts of the whiter portions, the Haversian canals, lacunæ, and canaliculi appear to be of the natural size, and healthy. In some, the lacunæ are larger, and so appear much closer than they should be. In the darker parts, the Haversian canals are larger than natural. The amount of increase in size is various; some are only a little larger, others have extended almost to the boundaries of their own system. In some parts of this dark portion, the lacunæ are also enlarged. When mounted in Canada balsam, the Haversian systems are seen to polarise separately, a black cross rotating around each Haversian canal as its axis. In many instances, it may be seen by the presence of the extreme ends of the limbs of the cross in the walls of the tunnels that they are formed by gradually increasing excentric absorption of the walls of the Haversian canals.

As far as can be determined by examination of the macerated and dried bone, the process which has been going on may be described as interstitial death, with more or less complete absorption of the dead matter, and, *pari passu*, a network-like deposit of new bone around each centre of destruction. In this way the increase in the dimensions of the shaft would be proportionate to the decrease of its density and strength. In parts, the new structure is condensing, and becoming eburnated in their lines and patches.

ON THE NUMBER AND DURATION OF EPIDEMICS IN CANTERBURY IN A PERIOD OF THIRTY YEARS, AND THE FATALITY FROM EACH.

By GEORGE RIGDEN, ESQ.,

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THERE seems scarcely any subject more interesting to us as medical practitioners than that of epidemics—whether we consider the means for their prevention and cure, or whether we take into consideration their relative frequency, duration, and fatality. And it is to be hoped that, at some future time, the united experience of all the medical attendants upon the sick, in every epidemic, may be recorded, either during or shortly after the outbreak. In the meantime, it seems desirable that such records as we possess of epidemics occurring in a large population should be made available as much as possible for future observers.

With this idea, I have the pleasure of presenting to the Society a short description of the number and period of duration of, as well as the number of deaths recorded from, all the epidemics that have occurred in Canterbury in the thirty years during which it has been my privilege to administer to a large proportion of the sufferers; and I am enabled to do this, first, and principally, from my own observations while in attendance; and, secondly, from a monthly examination of the public bills of mortality, which, during the last eighteen years, have recorded the cause of every death, according to the medical certificate, with the utmost accuracy. It must, however, be acknowledged that, prior to the year 1850, a large proportion of the deaths in this city was registered without the assistance of any medical certificate, which has rendered them of considerably less value as statistical records.

I propose, in the following abstract, to give a short record of the following eight diseases; viz., small-pox, scarlet fever, measles, malignant cholera, diarrhoea, diphtheria, whooping-cough, and continued fever,

which have occurred as epidemics in Canterbury during the period between Michaelmas 1837 and Michaelmas 1867. And, first, it may be stated that there have been four epidemics of small-pox, seven of scarlet fever, nine of measles, two of malignant cholera, six of diarrhoea, three of diphtheria, nine of whooping-cough, and six of continued fever.

Small-Pox.—The first epidemic of this disease occurred in 1837-38, and extended from October in the former year to June in the latter; it was fatal during the nine months to 64 persons, or at the rate of about one death to 270 inhabitants. The second was in 1847-48, and extended over a period of eleven months, viz., from November in the former year to September in the latter; it was fatal to 26 persons, or at the rate of about one death to 700 inhabitants. The third was in 1855-56, and extended over a period of fifteen months, viz., from February in the former year to April in the latter, and was fatal to 45 persons, or at the rate of one death to about 420 persons. The fourth epidemic was in 1865-66, extending over a period of thirteen months, viz., from February in the former year to March in the latter, proving fatal to 62 persons, or at the rate of one death to about 350 persons. Thus it may be reported that epidemics of this disease have visited Canterbury with considerable regularity about once in seven years, proving fatal to 197 persons; which, together with 19 deaths from sporadic cases, will give a total of 216 as the mortality from small-pox during the thirty years, or about 1 per cent. of the mean of the population during the period reported on.

Scarlet Fever.—The first epidemic of this disease extended over a period of thirteen months, viz., from March 1839 to April 1840, and was fatal to 80 persons, or about one death to 220 inhabitants. The second extended over a period of seven months, viz., from July 1843 to January 1844, and was fatal to 16 persons, or about one death to 1,125 inhabitants. The third extended over a period of five months, viz., from November 1848 to March 1849, and was fatal to 9 persons, or about one death to 2,000 inhabitants. The fourth extended over a period of twenty-four months, viz., from June 1854 to May 1856, and was fatal to 38 persons, or about one death to 490 inhabitants. The fifth extended over a period of ten months, viz., from October 1856 to July 1857, and was fatal to 24 persons, or about one death to 800 inhabitants. The sixth extended over a period of twelve months, viz., from February 1859 to January 1860, and was fatal to 38 persons, or about one death to 550 inhabitants. The seventh extended over a period of eighteen months, viz., from March 1864 to August 1865, and was fatal to 100 persons, or about one death to 220 inhabitants. Hence it may be reported that epidemics of this disease have occurred in Canterbury with considerable regularity about once in four years, proving fatal to 305 persons; which, with 17 deaths from sporadic cases, will give a total of 322 deaths from scarlet fever during the thirty years, or about 1.7 per cent. of the mean of the population.

Measles.—The first epidemic of this disease extended over a period of two months, viz., in March and April 1844, and was fatal to 8 persons, or about one death to 2,200 inhabitants. The second extended over a period of five months, viz., from December 1845 to April 1846, and was fatal to 42 persons, or about one death to 440 inhabitants. The third extended over a period of four months, viz., during April, May, June, and July, 1849, and was fatal to 8 persons, or about one death to 2,250 inhabitants. The fourth extended over a period of three months, viz., during April, May, and June, 1852, and was fatal to 16 persons, or about one death to 1,150 inhabitants. The fifth extended over a period of six months, viz., from December 1855 to May 1856, and was fatal to 19 persons, or about one death to 1,000 inhabitants. The sixth extended over a period of ten months, viz., from May 1858 to February 1859, and was fatal to 13 persons, or about one death to 1,600 inhabitants. The seventh extended over a period of five months, viz., from December 1861 to April 1862, and was fatal to 24 persons, or about one death to 890 inhabitants. The eighth extended over a period of four months, viz., during May, June, July, and August, 1863, and was fatal to 8 persons, or about one death to 2,700 inhabitants. The ninth extended over a period of three months, viz., from November 1866 to January 1867, and was fatal to 18 persons, or about one death to 1,220 inhabitants. Hence it may be reported that epidemics of measles have occurred with some irregularity about once in three years, and that its epidemics were fatal to 156 persons; which, together with 11 deaths from sporadic cases, will give a total of 167 as the mortality from this disease, or about 7 per 1,000 of the mean of the population during the period reported on.

Malignant Cholera.—The first epidemic of this disease extended over three months, viz., from July 20th to October 14th, 1849, and was fatal to 43 persons, or about one death to 450 inhabitants. The second extended over three months, viz., from July 25th to October 19th, 1854, and was fatal to 60 persons, or about one death to 310 inhabitants.