ABSTRACTS OF THE MILROY LECTURES ON SOME GENERAL CONDITIONS WITH REGARD TO EPIDEMICS.

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LECTURE III.—EPIDEMIOLOGICAL ASPECTS OF YELLOW FEVER.

Symptoms.—The Lecturer said that, from a clinical study of yellow fever in Jamaica during the years 1856-60, he had formed the opinion that the distinctive characters of the disease were:—
1. That it usually terminated in death or convalescence from the fourth to the seventh day, but that either event might occur as early as the second or as late as the tenth or twelfth, or even later. 2. That the general yellowness of the eyes and surface commenced at various periods in different individuals and epidemics. 3. That the urine presented certain symptoms, namely, on the evening of the third or morning of the fourth day traces of albumen; on the fourth day a considerable sediment, consisting almost wholly of vesical epithelium; on the fifth day an equally copious sediment consisting almost exclusively of granular renal tube casts. The urine by this time was scanty, contained much albumen, a diminished quantity of chlorides and urea, and, if there were much yellowness, some bile pigment; the excretion might be completely suppressed. From the third day the fæces, when formed, were greyish, or yellowish white, with an intermixture of black matter, when fluid consisting of mucus of the above colour, or coloured by bile or blood. 5. As the urine and fæces assumed these characters there was a tendency to black vomit, and hæmorrhages (so-called) from various mucous surfaces, or even from the skin. As to the character of the fever, it was necessary to recognise that the disease occurred both sporadically and in epidemics in a periodic (remittent or even intermittent) form, as well as in a continued form with a paroxysm of seventy-two hours, followed by the characteristic symptoms of the disease.

Mode of Origin of Epidemics.—Two views were held as to the mode of origin of the disease in a locality: one attributed it to causes in operation in the locality at the time, the other supposed that it must have been introduced by persons recently arrived from another locality where it was prevalent. In the great majority of examples adduced in support of the contagiousness of yellow fever, no attempt had been made to exclude a local cause. In numerous well-authenticated instances persons have contracted yellow fever in a locality where the disease was prevalent, have removed to a healthy locality, and passed through the fever there without affecting anyone about them, and that even when their numbers were considerable. The case of H.M.S. *Bristol* frigate was quoted as a particularly striking example; from this boat, soon after her arrival in Sierra Leone (December, 1865), where there was a severe epidemic, a party of 116 officers and men were sent to the receiving ship *Isis*, which had had several cases on board; the party slept on board the *Bristol* each night, and did not go ashore. Though the crew of the frigate included many young men fresh from England, and consequently quite unacclimatised, not a single case occurred in anyone who had not been on board the *Isis*, though a large number were engaged in immediate attendance on the thirty-eight cases which occurred among those who had. The case of H.M.S. *Brilliant* was quoted as a well-marked example of a ship's company contracting yellow fever on shore, while the ship herself was quite healthy; a severe outbreak occurred; the ship went to sea, and after the period of incubation had expired no fresh attacks occurred.

Alleged Instances of Contagion.—There was, it was said, no well-authenticated instance of yellow fever having been communicated by persons who had contracted it on board an affected ship to other persons on shore who had not come within the range of the emanations from the ship. The instances, supposed to have been afforded by the *Anne Marie*, at St. Nazaire, and by other vessels, were examined and shown to be capable of bearing a different interpretation.

Influence of Local Conditions.—The behaviour of yellow fever in Barbadoes was next discussed at great length, and while it was shown that the disease on many of the occasions when it was in-

troduced did not spread, certain local conditions were pointed to in connection with swampy ground, which appeared to stand in intimate connection with the outbreaks. The instances of the United States steamship *Susquehanna* and of H.M.S. *Orion* were quoted as instances of ships acquiring the condition necessary for producing yellow fever without communication from a previous case. Statistics and official reports were quoted in support of the proposition that certain epidemics of yellow fever in Bermuda sprang up at different points in the islands without the previous introduction from elsewhere of persons labouring under the disease. It was clear, therefore, that such an introduction did not constitute a necessary factor in the development of the conditions required to produce yellow fever, while the immunity which followed more extensive importations of persons labouring under the disease into healthy localities, or during the healthy part of the year at those which are occasionally subject to the disease at certain seasons, went far to prove that the introduction of cases of the disease had no influence in determining an epidemic. The potential factor must be widely diffused by aerial means, but in a form incapable of giving rise to the disease until it meet with a suitable soil for further development. The immediate exciting cause was clearly particulate, and was given off from a collection of mud in a ship's hold, or from a marshy or damp spot on shore.

A CASE OF ANGIOMA OF THE LARYNX.

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AMELIA M., aged 50, came to the out-patient room on December 2nd, 1887, complaining of loss of voice. With the exception of two attacks of bronchitis twenty years and twelve months previously, she had not been troubled with cough or expectoration. For the last eight or nine years, "perhaps longer," her voice had been very weak, and frequently had been lost completely. Menstruation occurred every fortnight, and was excessive, otherwise her health was fairly good.

The patient was a spare woman, with a fresh complexion, but was profoundly nervous, and could only speak in a whisper. Her face flushed on the slightest excitement. The pulse in the right brachial and radial arteries was smaller than in the corresponding vessels of the left arm, but the pulse on each side was very small and weak. The chest presented no abnormal signs. On laryngoscopic examination a small tumour was seen springing from the anterior extremity of the left vocal cord. This tumour, oval in shape and imperfectly bilobed, had a dark-red colour like that of a ripe raspberry, its surface being faintly granular, but not uneven. The growth was attached to the upper surface of the vocal cord by a flat ribbon-shaped pedicle, which permitted free movement. During deep inspiration the tumour at times slipped down into the subglottic region, and was almost lost to view, re-appearing on phonation. The appearance of the tumour is roughly indicated in the accompanying diagram.

The mucous membrane of the larynx in other respects was perfectly healthy in every part. The vocal cords presented no trace of congestion, but, when phonation was attempted, they exhibited curious oscillating choreiform movements towards the median line. On inspiration abduction was normally performed. Examination was rendered somewhat difficult by the patient's nervousness, which gave rise to spasmodic contraction of the sphincter muscles at short intervals.

Bromide of potassium and simple lozenges were prescribed, and the patient was advised to have the growth removed. A fortnight later, that is, at her second visit, the throat was sprayed with a small quantity of a 2.5 solution of cocaine, and the tumour was easily seized with Mackenzie's laryngeal forceps, and removed entirely. Very little bleeding followed, but the patient was so

hysterical afterwards that she had to be kept in the hospital for a couple of days. Since then she has attended as an out-patient.

The left vocal cord was much congested for a few days after the tumour was removed, but the injection soon diminished, and a small, translucent, oedematous swelling was noticed at the part where the growth had been attached. This has now disappeared, and the only morbid appearance which remains is a slightly swollen and congested condition of the left vocal cord, mainly affecting its anterior third. The patient's voice began to improve almost immediately, and is now quite normal.

The vocal cords still exhibit the same choreiform movements of adduction during laryngoscopic examination. The patient comes every few weeks to show herself, and was last seen on March 6th, 1888, when her condition was that which has just been described.

Microscopical Examination of the Tumour.—The growth consists of a system of cavernous, vascular spaces of various sizes. Some of these spaces are partially obliterated by thrombosis, others are quite free from thrombus. Blood corpuscles are seen here and there in the lacunæ, but in most cases they have dropped out during preparation of the sections. In many places remains of thrombosed spaces are visible, and there is a considerable quantity of coarsely fibrillated tissue having a lamellar arrangement (organising thrombus), situated between the individual lacunæ, especially towards the base and near the free surface of the tumour. The growth is covered by a laminated pavement epithelium like that investing the healthy vocal cord, but not marked by the usual papillary indentations. Between the epithelium and the angiomatous tissue there is a thin layer of loose, delicately reticulated connective tissue containing scanty round and branching cells and capillaries.

The vascular spaces are bounded by thin walls, which consist of glassy-looking, homogeneous connective tissue, lined by an endothelial membrane, and contain no unstripped muscular fibres. The structure of the tumour is thus seen to be that of a cavernous angioma, closely resembling the form of angioma not infrequently found in the liver. Its origin is doubtful, though from the prevailing cavernous structure, and the complete absence of cellular growth, it seems clear that it was essentially an angioma. The history would seem to show that it developed in adult life.

Angioma is an extremely rare form of laryngeal tumour. Sir Morell Mackenzie, in his work on *Diseases of the Throat*, says that he has only met with two growths of this kind, "one grew in the right hyoid fossa, the other from the right ventricular band." "A similar growth," he says, "has been observed in the former situation by Fauvel."

I can find no mention of angioma of the larynx in the pathological textbooks of Cornil and Ranvier or Ziegler.

OBSTETRIC MEMORANDA.

PUERPERAL CONVULSIONS IN A PRIMIPARA.

J. G., aged 25, married nine months, eight months pregnant, was taken prematurely in labour on Sunday, February 26th, caused by having, on the evening of the 21st, when seeing her mother off by the train, slipped and fallen into a carriage just as the train was starting.

I was called to her at 12 P.M. and found the membranes ruptured and the labour well advanced, the head presenting. The patient was flushed and excited in manner, but quite sensible and not much distressed by the pains. The infant, an undersized female, was born at 12.45 P.M. The placenta followed readily, and there was very little loss. I stayed with her some three-quarters of an hour, and left her apparently doing well.

At 4 A.M. I was summoned, and reached the house about 4.20 A.M. Shortly before 4 A.M. she complained of a strange feeling of oppression in the head, and was seized with a violent attack of eclampsia. The convulsions were general, the tongue being bitten, and a quantity of bloody froth escaping from the mouth. On arrival the convulsion had ceased, but the patient was maniacal and wandering. Twenty grains of chloral hydrate were given by the mouth, and she shortly fell asleep.

At 8.30 A.M. I was again sent for, as the convulsions had recurred at intervals, the first attack coming on within half an hour of my leaving the house. I prescribed a mixture with ten-grain doses of potass. bromid. to be given every hour or two, and visited

her soon after. She had then recently had a convulsion, and was violently maniacal; the jaws were closed, and it was found impossible to get her to swallow. I at once injected thirty grains of chloral in warm water into the rectum. This produced a speedy result, as the patient became quiet, and in a few minutes fell asleep.

With some difficulty I introduced a catheter, and drew off about an ounce and a half of cloudy urine. This, on being tested, was found to be highly albuminous, quite a third albumen.

At 4 P.M. she was seen by my partner, Dr. Beeby, who gave by the mouth thirty grains of bromide of potassium. She was then quieter, but dull and semiconscious, having had a convulsive seizure, but of less severity, a short time before. Altogether, from 4 A.M. until 4 P.M. she had ten fits of convulsions, the first five by far the most severe, and the intervening periods occupied by maniacal excitement, except when sleeping for a short time after the doses of chloral.

I saw her again at 7 P.M. She was then more excited, and had not slept. I administered by rectal injection forty grains of bromide of potassium, with twenty grains of chloral hydrate, and dusted five grains of calomel on the tongue, which she protruded when desired. She slept well during the night, and in the morning early the bowels acted freely, the motion being dark coloured, and very offensive. She now awoke conscious, recognised her mother, and passed urine voluntarily. This urine when tested contained only a trace of albumen. From this time she made uninterrupted progress, the mammary secretion became established, and she was able to nurse her infant.

The patient was a fair, slightly made, delicate woman. During pregnancy she had suffered from a severe attack of pleurisy on the left side, and after recovery had an attack of intercostal neuralgia. At 17 years of age she had an attack of scarlet fever. She herself had not suffered from convulsions previously, but a brother, at the age of 14, after scarlet fever, had a series of convulsive attacks lasting over some time.

It is a curious fact that the patient lost all recollection of the events connected with the labour, and of all that happened in the days preceding it up to the date of her mother's visit on February 21st.

Her recovery seems in great measure due to the effects of the chloral and bromide of potassium administered, and shows the value of the injection of drugs by the rectum when a patient is unable to take medicine by the mouth.

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SURGICAL MEMORANDA.

A CASE OF SUBSPINOUS DISLOCATION OF THE HUMERUS.

OWING to the rarity of this accident, I think the following case may be of interest:

E. H., aged 52, a strong, muscular labourer, came to the infirmary on February 8th, 1888, stating that while excavating for foundations a fall of earth occurred, and knocked him backwards against the side of the trench, his left elbow being driven forwards and inwards, and at the same time upwards. He complained of great pain in his left shoulder and arm, which he could only move very slightly. It was found that he had a subspinoous dislocation of the humerus, the diagnosis being easy. There was distinct flattening of the shoulder and prominence of the acromion, while the head of the humerus could be plainly felt lying on the dorsum of the scapula below the spine, and nearly halfway between the head of the scapula and its internal border. The elbow was directed forwards, and could be made to touch the side with some difficulty. There was an inch and a half of shortening. The reduction was easily effected by means of extension at right-angles to the body and external rotation. The man made a good recovery, being able to move his arm well and touch the top of his head with his hand in three weeks' time.

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NURSING OF THE POOR.—The seventh annual report of the North London Nursing Association states that the number of cases nursed last year was 1,363. Over 200 medical practitioners in the neighbourhood, it was stated, had availed themselves of the services of the nurses during the past year, or nearly double the number who applied during the former year.