physiological departments from any given school? A more generous equipment could be given for the teaching of medicine, surgery, and obstetrics, and space could be found for further development in the direction of pathology, pathological chemistry, bacteriology, and other allied branches. Then we might count not only on giving greater opportunities for practical instruction to undergraduates, but also for post-graduate research by our own men and by graduates from our colonial universities. What would become of the teachers at present concerned in the early studies, and who would be dispossessed by the above arrangement? The answer to this question is that, besides the professors, a considerable number of demonstrators will be required in the new centres, and that those who on patriotic grounds for the good of their school have given both time and labour to this work will be emancipated from drudgery, and will find opportunity for research and for giving instruction to advanced students in subjects which are cognate to their own life-work.

But will the severance of these early studies and their installation in central institutes weaken the attachment of students to their hospital school? Surely not. When young men come to London for their medical curricula they will enter at one or other of the centres as may be most convenient, and, having acquired the necessary knowledge of the preliminary and early subjects, they will then choose the hospital school which on the whole appears to them the most desirable. They will be in identically the same position as men coming from the old universities who have pursued their early studies in the medical department of either Oxford or Cambridge. Will anybody maintain that these old university graduates are less devoted to their hospital school in London than any other London students?

Depend upon it, anything which leads to economy of labour, to greater efficiency, to unification and consolidation of interests will very soon justify itself. The removal of anxiety as to the equipment of the preliminary and early studies in any given school will allow the teaching staff to concentrate its energy on the later study, and the existence in this town of three great centres for education in preliminary and early subjects, efficiently and generously equipped with professors, with demonstrators, and with laboratories, will go a long way towards establishing the foundations for supremacy of the medical education in London. When these foundations are laid, sure and strong, we may hope to cope successfully with the development of advanced studies and advanced research in every school hospital in this metropolis, and we may then look forward to London becoming in fact as well as potentially the greatest clinical school in the world. It would be most undesirable that these centres should be identical. Differences in method and equipment tend towards the survival of the fittest, and an honest rivalry can bring nothing but good to the medical body politic.

Finally, to sum up the arguments which I have submitted to you, what can be more fitting than that these centres should be established as constituent parts of the teaching University of London? In this way the best guarantees will be taken for permanence of equipment and management, and for breadth and liberality of view in future development.

Moreover, the intimate association of the great body of medical students of London in such a way would contribute the largest and most important contingent in building up the teaching side of the University, and the hospital medical schools would maintain their vital independence, and, freed from embarrassing and unbusinesslike obligations, would be able to make real advances in scientific medicine and in its teaching.

Gentlemen, whilst rejoicing with you in your individual successes this day, and exhorting you to cherish the good name and the fame of your hospital and school, I submit for your patriotic consideration the claim which I have imperfectly stated for the educational needs of medicine in London as a whole.

A FRENCH CODE OF MEDICAL ETHICS.—At the Congress of Professional Medicine held in Paris in 1900, it was decided that a committee should be formed for the purpose of drawing up a code of medical ethics. It was intended that this code should be handed to every one taking a medical degree on the day of the presentation of his inaugural thesis. The Committee has just published the result of its labours in the form of a pamphlet bearing the title *Avant-projet d'un Code de Déontologie Médicale*. The pamphlet consists of two parts, an introduction dealing with the principles of medical ethics and a code of 112 clauses.

A Clinical Lecture

ON

ACUTE MALIGNANT ENDOCARDITIS.

Delivered May 6th, 1904.

By SIR DYCE DUCKWORTH, M.D., LL.D., F.R.C.P.,
Physician and Lecturer on Clinical Medicine, St. Bartholomew's Hospital.

GENTLEMEN,—I propose to discuss to-day the case of a boy who was brought into Matthew Ward on April 20th, and who died after a fortnight's illness with some remarkable symptoms. H. E. M., aged 13, a schoolboy, was in his usual health on April 12th. His mother, a respectable and intelligent woman, gave us the following history: The boy attended school on that day, but had a fall from a lamp-post on his head, which appears to have stunned him. He was one of nine healthy children, and had had no important illnesses—certainly no rheumatic fever. He came home, feeling faint and poorly, and was put to bed, where he remained under medical care till April 20th, when he was admitted to the hospital. On the 18th he complained of pains in his limbs and general tenderness. There was constipation, but no vomiting. His temperature had varied from 101° to 103° before his admission. He was semi-comatose when brought in on April 20th. The family history was unimportant. The boy lay still in bed, but was tender all over when touched. His complexion was dusky red. He was fairly well nourished. There were numerous petechiae on the trunk and limbs, which appeared to be due to flea-bites. The temperature was 100.2°; the pulse 100, of moderate volume and low tension. Respirations 28, shallow. The conjunctivae were much injected, the pupils large and equal, reacting to light. No discharge or ill odour at either ear, and no swelling in the mastoid regions. The lips were dry; tongue dry and glazed, not furred. No injury to the scalp or skull could be detected. A few small glands were palpable in the neck. There were signs of bronchitis in the lungs, which did not expand very fully. The heart's apex beat was in the fifth left space, just outside the nipple. The dullness extended only to the left sternal line. Dr. Gould found, on admission, a slight murmur with the first sound at the apex; second sound natural. (This murmur was not recognized by me some two hours subsequently, and never on any succeeding day, although Dr. Gould heard it again on another occasion.) The abdomen was full, and moved little on respiration. No resistance or special tenderness over it. The spleen was palpable, the liver natural. The limbs were spare. No signs of arthritis or epiphysitis. The knee-jerks were natural. An ecchymosis was noted over the left internal malleolus. The urine was of sp. gr. 1010, and contained a trace of albumen.

The first impression was that the boy was probably suffering from enteric fever. On testing the blood for a Grönbaum-Widal reaction, this was found negative. The boy became almost comatose, and had to be fed by the nares with milk, beef-tea, and brandy, and the nitro-hydrochloric acid draught of the hospital was given. Fresh petechial rash appeared daily on the trunk and limbs, and the case now assumed many features of spotted typhus fever, save in respect of the large pupils. He passed urine under him constantly. On April 23rd the pupils were unequal, the right the larger. Some rigidity of the right leg was noticed, also some retraction of the head and slight arching of the trunk. There was thus evidence of some cerebro-spinal meningitis. The right optic disc was fairly natural, only some undue fullness of the veins being apparent. A little blood-stained discharge came from the right ear, but it came from outside the middle ear. Dr. Gee and Dr. Ferrier saw the boy with me on this date, and it was decided to examine the blood and the cerebro-spinal fluid for evidence of some special variety of toxæmia. Ten c.c. of blood were removed from a vein in the right arm, and as much fluid from a lumbar puncture, both being kindly examined by culture by Dr. Horder. The boy gradually lost strength, his temperature ranging from 102° to 104.6°, became more comatose, had some blood-stained discharge from the nose, and died on April 25th, the fourteenth day from his first symptoms of illness.

It was clear that this case was one of acute toxæmia, though it was not easy to discover the exact nature of it. The condition of the blood showed a good proportion of xanthocytes—4,544,000—and some degree of leucocytosis—14,000—during life. The results of the cultures were only made known on

the day the boy died, and these revealed a copious invasion both of the blood and cerebro-spinal fluid by a variety of streptococcus, probably longus, according to Dr. Horder.

We come now to the necropsy made on April 26th, an account of which I will read to you. By the light thrown upon the case after death we can readily see that we were face to face with most of the symptoms now recognized as depending on toxæmia due to an arterial pyæmia starting from the mitral valve of the heart—to wit, pyrexia, hæmorrhagic effusions, and visceral infarctions. Clinically there are several types of the malady, for it is apt at times to simulate enteric fever, acute general tuberculosis, and, as in some respects in this instance, even typhus fever. Hence the diagnosis is by no means always easy to make till some time has elapsed.

Necropsy Twenty Hours after Death.

Well-grown, fairly-nourished boy. Many small petechial hæmorrhages, specially over trunk and lower arms.

Head.—Cranial bones natural; a few subpericranial hæmorrhages. Dura mater and sinuses natural. Arachnoid and pia mater: Over convexity a few small subarachnoid hæmorrhages. Arteries: Larger arteries natural. Brain 54 oz. Puncta cruenta well marked. Spinal cord not examined. Eyes not examined. Ear: In right ear some blood-stained mucus; left natural.

Chest.—Oesophagus: A number of small subepithelial hæmorrhages throughout length. In lateral wall of pharynx just behind the tonsil on either side an area the size of a shilling covered with thin yellow granular "membrane." Glands in neck natural. Larynx and trachea: A number of small petechiae. Lungs: Right 17 oz., left 18 oz. A few small subpleural hæmorrhages on either lung. Both lungs congested. Heart, 8½ oz. A drachm or two of slightly turbid fluid in pericardial sac. Beneath visceral pericardium a few petechiae. Heart muscle pale with a few minute hæmorrhages in its substance. Pulmonary, tricuspid, and aortic valves natural. The mitral valve was completely surrounded as to its free edge with a ridge of recent granulations about ¼ in. wide and ½ in. high. The granulations were yellowish and soft in consistence. Aorta and vessels natural.

Abdomen.—Peritoneum natural. Stomach: Many small petechiae in mucous membrane. Intestines, a few petechiae. Liver, 54 oz.; very pale, large, no hæmorrhages. Spleen, 10 oz., soft; two or three recent medium-sized infarcts. Pancreas natural. Abdominal lymphatics natural. Suprarenals natural. Kidneys, 6 oz. each. On the surface and in the substance of each were innumerable small hæmorrhages. In the right one moderate-sized anaemic infarct and another larger recent one, of which only the middle third was anaemic, the outer third on either side of the central wedge being hæmorrhagic. In the left kidney a similar appearance externally with another large hæmorrhagic infarct. Ureters and bladder natural. Organs of generation natural. Joints natural.

Nature of Disease.—Endocarditis, malignant. Splenic and renal infarcts. Petechial hæmorrhages in skin, all serous membranes, oesophagus, stomach, and trachea.

We now learned the cause of all the severe symptoms, and may fairly ask why we did not determine the true nature of the malady during life. I suppose the answer is that we were chiefly misled in consequence of finding no plain indications of endocarditis as evidenced by a cardiac murmur. I think we should have had no hesitation in our diagnosis if there had been a constant or a varying murmur. You will remember that Dr. Gould heard a murmur on the day of the boy's admission, and again three days later, but this was fleeting, and never heard again by me or by any of the clinical clerks. Yet there was another indication of cardiac disease. The heart's apex was a little displaced. Again, the condition of the spleen might have suggested infarctions, and had there been hæmaturia, which, strange to say, was absent, despite the hæmorrhages and infarctions found in the kidneys, we might have been set on the right track. I take up this point, and consider it a little further. It is sufficiently recognized that the malady this boy suffered and died from sometimes runs its course without the occurrence of cardiac murmurs, and this fact must always add seriously to the difficulty of making a certain diagnosis in such a case. Yet we have to learn to suspect an endocarditis in the absence of valvular murmurs. This is one lesson. We have nothing in this boy's history pointing to any previous disease of his mitral valve. It is therefore very noteworthy that the lad was seemingly in good health till the day he sickened, and his illness became at once grave. We may next inquire as to the source of the streptococcal invasion. In many of these cases there is reason to believe that such infection occurs in the lymphatics of the throat, but there remains room here for further research into these matters. There was some granular membrane found in the pharynx in this case, as we have seen. We may take note again of the absence of signs of endocarditis in these cases, and bear the fact in mind when we are dealing with cases of obvious rheumatic fever and of chorea. Here, again, we are in the presence of an infection and a toxæmia,

due also to a member of the streptococcal family, and we pay careful attention to the state of the heart and its several textures, are always on the alert to detect the earliest signs of inflammatory mischief, and always glad to find no evidence of it. But may we not sometimes be wrong in concluding that the absence of murmurs is a certain sign of immunity of the endocardium in such instances? I am inclined to think we are sometimes misled in this matter, and that such inflammatory changes actually exist without giving token of their presence, provided they are small, bead-like, and not grossly vegetative. These, then, are the chief lessons of this sad case. I think nothing further could have been done for this patient, or for any in like case when the malady is so virulent and overwhelming. Happily, there are degrees of intensity of all forms of toxæmia. Some of these cases of infective endocarditis last for months and even for a year. I have had such cases under my observation. In the chronic forms we now seek, as you know, to introduce anti-toxic sera into the system by the skin or by the bowel, and sometimes with success. We may look forward to better results when the presence of particular strains of micrococci are recognized in the blood, and specific sera are manufactured to combat these. Hitherto there has generally been a negative result in blood cultures from these patients, but Dr. Horder tells me he believes this is often due to too small an amount of blood being dealt with. A finger-prick or ear-prick does not yield sufficient for an adequate examination, and blood should be taken from a brachial vein with due precautions. Dr. Kanthack was wont to say that if in any case the blood contained toxic particulate elements, the prognosis was unfavourable. We may now, however, hope for better results in the near future, and so be enabled to render less grave the prospects of this terrible malady.

A Clinical Lecture

UPON THE

EARLY MICROSCOPICAL DIAGNOSIS OF TUMOURS.

Delivered at St. Bartholomew's Hospital on June 29th.

By C. B. LOCKWOOD, F.R.C.S.,
Surgeon to the Hospital.

I NEED not dwell for one single instant upon the importance of the early diagnosis of tumours. In the beginning the whole disease may be taken away with an abundant margin for safety; towards the end who can say whither it may not have spread?

Disabuse your minds of much of that which you have read or been told.

In books tumours are "innocent" or "malignant," but in Nature such distinctions do not exist. In a little while I shall tell you of tumours which seemed to be innocent and yet were malignant, and of tumours which seemed malignant and yet were innocent. Do not be misled by the positive air wherewith some assert the nature of tumours which they cannot see and have only felt with difficulty. The errors they fall into would be ludicrous were they not fraught with tragedy. It is, moreover, strange to see how soon these errors are forgotten. It is, however, an attribute of the human mind to remember the agreeable and forget the disagreeable. After guessing it is pleasant to be right; unpleasant to be wrong; so that the right guesses are remembered and paraded and the wrong forgotten.

I, too, once thought that the rules of art would enable me to tell clinically whether a tumour was innocent or malignant, but much has happened to shake my confidence. Some years ago I was asked to see a patient and remove an abdominal tumour. The abdomen of this unfortunate woman contained ascitic fluid in abundance, and masses of malignant disease. The liver, too, was enlarged and full of nodules. Naturally I looked for the primary growth. In the left breast was a globular tumour about an inch in diameter, and the axillary and sub-clavian lymphatic glands were enlarged. Sixteen years before a small cyst had been found in the left breast at the site of the tumour. The cyst had been tapped and injected with iodine. A lump remained and had slowly but steadily grown. As you are aware, cysts of the mammary gland sometimes contain an intracystic tumour growing from their walls. In the case which has just been narrated it was almost certain that the intracystic growth was sarcomatous. Those of you who are