On section the tumour presents to the naked eye a firmer pinkish part, embedded in which are masses of softer material varying in colour from yellow in the ramus of the jaw to pale yellow in the basis cranii and white in the peripheral parts of the growth. Microscopically a portion of the growth taken from the centre of the mass involving the ramus has the structure of squamous epithelioma, showing marked tendency to rapid evolution and keratinisation of its cells.

Although after death the largest mass of new growth was found in the lower jaw (where, as well as in the parotid region, it had undoubtedly increased much during the latter months of the patient's life), still I do not think the growth began here and then spread to the base of the skull. It was probably the reverse of this; or else the growth in the lower jaw was an independent one. The history seems distinctly to point to a very early implication of the fifth nerve on the right side, soon to be followed by an involvement of the seventh, the third, and other cranial nerves on this side, a course which may best be explained by supposing the growth to have started in the sphenoidal sinuses, and thence to have extended into the occipital bone, as well as into the temporal bone, from which latter situation the growth may have spread into the lower jaw.

For three months before admission the patient said he had been "unable to open and close the jaw, and he could not chew his food." On examination we found, in explanation of this disability, that the muscles of mastication were paralysed and atrophied on both sides. The fact that the motor division of the fifth was the only nerve paralysed on the left side was very difficult to explain at first, but when, later on, the left seventh also became involved, it seemed clear that it must be due to an extension of the growth into the left temporal and the left side of the occipital bone. Still it was a very strange feature in this case that for several months the motor division of the fifth should have been the only nerve affected on the left side.

The dissecting nature of a growth of this kind was also well seen in another direction, to which I several times called attention at the bedside. I allude to the fact that for the first two or three months this man was under our observation, whilst we had evidence that the right spinal accessory was most gravely affected, seeing that the sternomastoid and the upper part of the trapezius were paralysed and completely wasted, yet the right vagus, which passes through the same foramen, seemed for some months to be scarcely, if at all, involved. Later on the lower part of the trapezius also became paralysed, and then also the right side of the diaphragm became affected, both these muscles being supplied from the third and fourth cervical nerves, and the growth having been traced downwards in the soft parts from the basilar process of the occipital bone, so as to involve the second and probably the third cervical nerve.

Some irritation of the right pneumogastric nerve, in the month of December and subsequently, was rendered probable, more especially by the slowing of the pulse whilst the respirations became rather more frequent. But it was not till about April 21st, and later, that this nerve seemed to have become distinctly paralysed, so as to bring about the increasing frequency of the pulse together with the slowness and irregularity of the respiration which characterised the closing days of the patient's life. How far the peculiar attacks from which the patient suffered in the months of December and February could be connected in whole or in part with disturbed function in the pneumogastric nerves I am unable to say.

The twitchings of the limbs that were noticed several times during the month of April were probably connected with irritation of the pons Varolii, which, at the necropsy, was found to be slightly flattened, especially on the right side, and perhaps slightly infiltrated by the growth in the dura mater covering the occipital bone. The superficial softening of the tip of the right temporal lobe, on the other hand, was probably due to a thrombosis of the small vessels that passed from the infiltrated base of the skull to this region of the brain.

(To be continued.)

THE French Government has agreed to a grant of 1,052,200 francs (nearly £43,000), half of which is to be provided by the department of the Seine, for the erection of a medico-legal institute in Paris.

ON
CLINICAL MEDICINE & CLINICAL METHODS.
BEING THE
VALEDICTORY ADDRESS TO THE
CLINICAL SOCIETY.

By SIR DYCE DUCKWORTH, M.D., LL.D.,
Treasurer of the Royal College of Physicians; Physician and Lecturer
on Medicine at St. Bartholomew's Hospital; Honorary Physician
to H.R.H. the Prince of Wales; late President of the
Clinical Society.

GENTLEMEN,—Before I formally declare this session closed I beg leave to address to you a few remarks from this chair, which I occupy to-night for the last time. Owing to the altered date of our annual meeting I have had the honour of presiding over the fortunes of this Society for some months longer than any of my predecessors.

In reviewing very briefly the term during which I have been in office, I think I may safely affirm that the Society has continued to fulfil its purpose and has shown signs of vigorous life. The attendances of members have been large; the contributions both of living specimens—as we call them—and of papers have been numerous, and in many instances of high importance.

In my opening address I ventured to denounce the modern tendency to pursue novelties in treatment too assiduously and to let go the hold of well-approved methods. I had for my text at that time the unseemly excitement which was rife in respect of Koch's vaunted method for the treatment of tuberculosis. That is but twenty-eight months ago, and I will ask you to-night what value you now attach to that method, and whether my remarks on the occasion referred to have or have not been justified by our experiences in that brief period.

My term of office has been signalled by the continued presence of influenza amongst us in an epidemic that has proved sadly disastrous, but which at last shows signs of passing away. We have noted many and varied features of this scourge, both in its course and in its sequelæ.

We have withstood in these happy islands an advancing wave of Asiatic cholera, which wrought sore havoc on the European Continent, and which threatened us in several of our seaports. The enlightened and promptly-applied methods of our Public Health Department—in defiance of effete and discredited quarantine regulations—have been so far successful as to render us hopeful of again withstanding this plague should it reappear—as it may—in the ensuing summer or autumn.

We have issued, as you are aware, the results of our Committee's labours on the important question of the incubation periods of certain infectious diseases, and have thus sent forth to the medical world a volume which will not fail to confer renown on this Society for all time. The work of this Committee extended over fourteen years—a period none too long for such an inquiry if it was to be, as it indeed required to be, worthy of this Society and its results dependable for daily reference. I may again refer to the special services rendered to this Committee by its Secretary and Editor, Dr. Dawson Williams.

We have had the satisfaction to note further during my tenure of office that a means of combating that strange malady, which was first and fully brought to our knowledge in this Society—myxœdema—has been introduced, which, so far as we have experience of it, encourages us to hope that a certain and quite remarkable alleviation of its symptoms is possible, and that, perchance, the progress of the disorder, may be effectually stayed. This is surely a very fitting sequel to the earlier clinical studies of this malady encouraged by this Society, and the efficacy of this new therapeutic method may perhaps justify us in anticipating that future discoveries await us in respect of the treatment of some other diseases by measures akin to that so ably promoted by Dr. George Murray and other members of this Society.

I should like to add, lastly, that I have had reason to observe that some of our younger members are too chary of taking part in our discussions and debates. It is always becoming to be modest, but it is often stupid to be silent, and it

it is a common fault nowadays to try and agree with everybody, to have too little courage of one's convictions, and to be afraid to speak out. We need a little more friendly friction. This would be good for us, and I make bold to urge it.

A CASE OF PNEUMONECTOMY.

By D. LOWSON, C.M.,

Assistant-Surgeon Hull Royal Infirmary : Surgeon Hull Women's Hospital, etc.

THERE are, perhaps, few to whom the removal of a portion of lung for disease has not occurred as a vague possibility; and from various hints and suggestions scattered throughout our clinical records, some seem to have duly weighed and considered the chances of success; but of practical result I know of but one case by Tilmanns, of Munich, and the short record I have seen gives no detail of procedure. (Since writing I find Tuffier has performed pneumonectomy by a small opening; and Zakharevitch, in Russia, has done many on the lower animals.)

To myself it has for a very long time been the subject of the greatest interest, so much so that many years ago I performed what, I regret to say, I could not at the present time venture upon without subjecting myself to the direst legal penalties—a couple of vivisection experiments. These, together with numerous other experiments on the dead body and a considerable experience in abdominal surgery, at last gave me sufficient knowledge, and, with the latter, sufficient courage to operate on the human lung when a suitable case presented itself.

My first vivisection experiment was on a rabbit. Under chloroform I opened the right pleural cavity by dividing the second and third ribs, and put a ligature round the upper half of the lung. In these small animals, however, the lung is so friable that the ligature cuts its way quite through. This operation was therefore a failure, but, nevertheless, through it I got to know several facts which were previously unknown to me, the chief being that, when the lung collapses, not only is the air driven out, but in great measure the blood as well, for there was no hæmorrhage, though half the lung was practically amputated.

Finding the lung so friable in the case of the rabbit, I went to a butcher's shop, and tried various forms of ligatures on young and old lungs of different species, of animal, and found all those usually sold by butchers have lungs sufficiently tough to bear an ordinary No. 6 plaited silk ligature without cutting or tearing much. These being therefore tough enough to bear ligation, I thought I should find a dog's lung equally so.

Accordingly I procured a young and healthy animal, and, having placed him under the influence of chloroform, I opened the right pleural cavity by an incision over the anterior part of the second rib, and, having cleared the bone from the intercostal muscles, I detached from its inner surface the parietal layer of the pleura and removed a considerable piece of cartilage and bone. I then pinched up the external pleura and pricked it, so that the lung might collapse slowly. As a matter of fact it collapsed rather rapidly, as could be seen through the transparent membrane, so I opened it freely, pulled out the apex, tied it firmly, cut off about half of the upper lobe, and dropped the stump in. In closing the incision I found it impossible to bring the pleura together, at which I was rather disconcerted, as I was then under the influence of Wells's dictum that in operations on the peritoneum the serous surfaces must in all cases be brought together. There was, however, no help for it, as the pleural membrane was firmly attached to the ribs above and below, and was not elastic enough to allow of the edges being approximated, so I united the rest of the thickness of the wound, dressed it antiseptically, and having made a soft bed for the patient, left him to recover from the anæsthetic. Fifteen minutes after I looked in upon him to see how he was, and was received with wagging tail and other evident signs of recognition. For the rest of the day he was nursed on a soft rug before the fire; next day he was quite lively, and on the second morning I was surprised to find him outside chasing another dog at full speed. From this forward he continued well, and I determined to retain him as a companion for the

rest of his life. For a month he remained with me, all the time in splendid condition, and, being a well-bred dog, he was much admired. This quality, however, lost me my companion. He was stolen, and, in spite of every effort to recover him, I have never seen him since, but I have still part of his right lung in my possession. His subsequent master would little suspect the mutilation his dog had sustained.

Coming next to the dead human subject, I found some modification would have to be made in the mode of ligation on account of the size of the organ. I still kept to the region of the second rib as regards external incision, as most room can be got there, the intercostal spaces being widest in that situation. It was easy in the dead body to separate the intercostal muscles, and with a periosteal elevator to peel the parietal pleura off the interior of the rib, and, on incising the membrane, the lung was seen to collapse, though slowly. On including part of the upper lobe in a ligature, and tying with all my strength, it did not satisfactorily compress the lung. This was for the most part due to the œdema which had preceded death; and in all subsequent ligations on the dead this œdema interfered with the formation of a correct estimate of the amount of compression likely to be exerted by a single ligature on the living human lung; nor had I now an opportunity of trying the effect on the living animal of transfixion, as the Antivivisection Act had come into force. It is to be regretted that what would apply very properly to the indiscriminate practice of cruelty should stand in the way of the evolution of surgical science.

The following difficulty was also made apparent by those *post-mortem* experiments. The height to which the pleural cavity extends into the neck—to a level with the cricoid cartilage—is too great to allow of the fingers alone separating adhesions in that region. If, therefore, such should exist, a piece of the third rib would have to be removed in order to allow of the entrance of the hand for purposes of detachment. I also noticed that, as in the dog, the edges of the wound in the pleura could not be approximated, but this did not trouble me now, as all went well in the dog's case, though a large piece of superjacent muscle lay exposed in the anterior wall of the pleural cavity.

I had now collected all the experimental knowledge within my reach, though to my mind incomplete in many ways.

1. For example, I was ignorant of the effect of transfixion; though, having ascertained that the collapsed lung is practically bloodless, I did not feel much afraid of any harm resulting from that.

2. I was very much afraid of the effect of a pneumothorax more or less suddenly developed. Still one lung did the work well, and for some time, in the case of the dog; and, besides, the physical conditions in collapse with open chest wall are different from those of the ordinary clinical pneumothorax, where hyperdistension has probably a great deal to do with the accompanying dyspnoea.

3. The thought haunted me also that even if the ligature were well and firmly applied, a rapid absorption of the air, or at least of the oxygen part of it, might follow closure of the external incision, and, expansion of the lung resulting, it might slip its collar (ligature), and hæmorrhage and perhaps pneumothorax follow.

4. This at the same time raised the question of extra- and intrapleural treatment of the stump. Should it be dropped in after disinfection of the surface, or should it be fixed in the external incision? The latter could not be done in all cases, and if the former plan were adopted the doubt would arise whether the stump could be rendered thoroughly aseptic, where each air cell opened might be a source of sepsis.

5. Another fear had reference to adhesions; I was especially afraid that if such existed over the superior cava or innominate veins, their detachment might involve the fatal risk of tearing of the venous walls in spite of the intervention of a covering of pleura.

6. Serious difficulty and danger might also arise through injury of vagus or phrenic nerves; or unknown and uncontrollable effects might follow injury to the upper dorsal outflow of the sympathetic.

Many of these doubts and questions might have been answered by the prosecution of vivisection experiments, but in this direction, as I have already said, I was barred. All