(3) Application to the nose and pharynx of a 10 per cent. or 20 per cent. cocaine spray combined in equal parts with ephedrine. (4) Careful lubrication of nasal passages with sterile liquid paraffin. (5) Intubation to be done, apart from exceptional cases, by direct vision.

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A PLEA FOR BETTER ENDOSCOPIC TRAINING*

BY

G. EWART MARTIN, M.B., Ch.B., F.R.C.S.Ed.

*Surgeon in Charge of the Ear, Nose, and Throat Department,
 Royal Infirmary, Edinburgh*

Great advances have been made in the field of thoracic surgery within the last few years, and the operative risk is being reduced to a minimum. There is now a possibility of eradicating malignant disease of the lung, but operative measures must fail unless the disease is recognized early. The clinical diagnosis of primary carcinoma of the lung lies in the hands of the bronchoscopist.

For the last five years the records in the department under my charge in the Royal Infirmary, Edinburgh, and my own private records for the same period, include thirty-four cases of malignant disease of the lung diagnosed bronchoscopically, and of these one patient is alive over a period of two years and three over a period of one year. In every case the final diagnosis was made too late for operative intervention. The implantation of radium and radon seeds has been tried without success. X-ray therapy has as yet failed to cure, although it has in some cases retarded the progress of the disease. During the same period in the surgical and medical wards of the Royal Infirmary, Edinburgh, 182 cases (apart from those mentioned above) have been diagnosed as carcinoma of the bronchus, either clinically and radiologically or after a post-mortem examination. None of these was referred to the bronchoscopist for confirmation of the diagnosis. Operative intervention was not considered possible. X-ray treatment was tried in many cases without any cure.

It would seem either that there is a lack of co-operation between the physician and the bronchoscopist, or that patients are too late in reporting to the physician for treatment. Early symptoms may be overlooked, but if there is a suspicion of the presence of malignant disease reference should be made to the bronchoscopist for diagnosis. The physician in the past has tended to rely for confirmation on x-ray findings. A commencing carcinoma of the bronchus which could be revealed on bronchoscopic examination may show clinically only as an occasional haemoptysis and not at all on the x-ray film. To wait for a shadow on an x-ray plate before completing the diagnosis may be rendering operative eradication of the disease impossible. Thus the onus of early diagnosis rests with the bronchoscopist to whom the case is referred. Is our endoscopic training sufficient to justify this responsibility?

* Read in opening a discussion in the Section of Oto-rhinolaryngology at the Annual Meeting of the British Medical Association, Aberdeen, 1939.

The Advance of Endoscopy

Twenty years ago the possibility of examining the inside of the lung was unknown to many. When Chevalier Jackson spoke at a meeting at Bath in 1925 only a few laryngologists possessed the necessary armamentarium for bronchoscopy and still fewer had the experience. The science of endoscopy has advanced rapidly. It is recognized by the physician as a definite practical means of diagnosis, but yet it seems that this form of diagnostic examination has not been developed on wide enough lines.

In America endoscopy has been established as a branch of laryngology, but has also been developed on lines apart from its mother specialty. There is a bronchoscopic clinic attached to a great many of the larger hospitals where cases can be referred for diagnosis and treatment. In this way operative training can be obtained, as well as the practical experience necessary for efficient diagnosis. Many from this country have taken advantage of the training offered in these clinics and have afterwards developed a specialty of bronchoscopy on their own lines, but always as a part of oto-laryngology. Cases referred for bronchoscopic examination have to take their turn with all the other cases of a busy oto-laryngological department.

Establishment of Central Endoscopic Clinics

Financially the establishment of similar clinics in this country is impossible until State medicine presents a Utopia where work would be the first consideration—the State supplying the means to live. It might be possible, however, for the several oto-laryngological departments, say in one town or in one area, to combine to form a central endoscopic clinic to which cases could be referred direct on specified days. This would allow of the segregation of the endoscopic from the purely oto-laryngological cases. More time could be given to these cases, and those working in that department would therefore gain more experience and obtain a better training. The necessary armamentarium could be enlarged instead of being so often a bare minimum, and special beds might be available.

A precedent for such clinics already exists in the formation of orthopaedic clinics and neurosurgical clinics in the department of surgery. In some centres thoracic surgery is being established as a specialty. There it might be possible to develop endoscopy and thoracic surgery side by side. The need for early and efficient diagnosis no longer allows of a place for the occasional bronchoscopist.

Unfortunately in this country we are unable to establish training centres such as exist in America and Paris, where operative technique can be taught on the cadaver and living animals, such as dogs. Here we can learn to pass the bronchoscope on the cadaver; but owing to various Home Office regulations we can only pass a bronchoscope on living animals under licence, using a general anaesthetic. If we employ a local anaesthetic we lay ourselves open to outside criticism, although it has been demonstrated that the bronchoscope can be passed without pain or harm to the living model.

There can be no doubt, however, that greater experience could be obtained and teaching be benefited if we had specialized centres instead of numerous small clinics. We have a great opportunity for the organization of endoscopic centres in the hospitals given over entirely to diseases of the chest (apart from phthisis). In these hospitals the physician carries out his own bronchoscopy

as part of his routine examination. It must be remembered, however, that no bronchoscopy should be performed without thorough preliminary examination of the nose, nasopharynx, and larynx. The truth of this precept, which has been emphasized by Chevalier Jackson, has been borne out in my own experience. Many cases referred to my department as bronchiectasis have proved on examination to be chronic bronchitis with some dilatation of the bronchi secondary to a post-nasal discharge as the result of an ethmoid infection with nasal polypi, or an antral infection. The elimination of the cause has very often cleared up the chest condition without the necessity for endoscopy.

The Practice of Bronchoscopy

Unfortunately there is a tendency in this country to consider bronchoscopy a difficult operation requiring the aid of a specialized anaesthesia, whereas it is a simple though specialized examination of the oesophagus and the lower air passages with a view to aiding the physician or thoracic surgeon as cystoscopy aids the abdominal surgeon. The operative field of bronchoscopy and oesophagoscopy is practically limited to the removal of tissue for pathological report and the removal of foreign bodies. The removal of a foreign body is attempted by many without much previous training, and yet all of us who have worked with Chevalier Jackson know that his removal of a foreign body from the bronchus in thirty seconds required hours of practice before the operation, to make certain that his eye, hands, and forceps were perfect.

This practice can be obtained quite effectively by the use of a mannikin in which one can reproduce the position of the foreign body seen in the radiograph and practise its effective removal. Fortunately, perhaps, in this country very few cases of foreign bodies in the bronchus occur. Why there should be this difference from other countries has never been explained, although it suggests that our diagnosis is incomplete—another plea for closer co-operation between physician, radiologist, and bronchoscopist.

Summary

To sum up, the need for earlier diagnosis of carcinoma of the bronchus must be recognized by everyone. In recent publications the thoracic surgeon has proved that mortality in chest surgery is almost negligible. The deep x ray therapist has to admit failure. In a few apparent cures the presence of malignant disease has been demonstrated by only x rays—the findings have never been histologically confirmed. In other words, the case has never been referred for endoscopic diagnosis. It would therefore appear that the bronchoscopist must give the initial and final diagnosis, and then, along with the radiologist, judge which cases might be referred to the thoracic surgeon with a hopeful operative prognosis. The need for training and for co-operation is very evident. Training and co-operation are impossible unless endoscopic cases can be centralized to special departments. Whether this department should remain under the speciality of laryngology or become a branch of thoracic surgery may yet have to be decided. Personally I cannot envisage an endoscopist who is not a trained laryngologist.

Ozaena.—According to Halász, ozaena is caused by lack of a "tonsillar hormone" which is similar to acetylcholine. A method of treatment is described.—Some New Data concerning Pathology and Treatment of Ozaena. H. G. Halász.—*J. Laryng.*, May, 1939, 54, No. 5, 245.

Clinical Memoranda

Multiple Fractures without Patient's Knowledge

The following case is worthy of record as one in which multiple fractures of several long bones occurred without the knowledge of the patient.

CASE REPORT

A married woman aged 64 was admitted to the Buxton Clinic for Rheumatism and Allied Diseases on July 20, 1937. She gave a history of pain in the muscles of the back, the ribs, shoulders, and arms for about five years; the pain was always worse in winter. In August, 1936, she knocked her right leg, which became very swollen and painful; the diagnosis was inflammation of the bone. In 1914 she had a great deal of pain in the legs, and red blotches and lumps, which lasted for months, appeared. Apart from an operation for gastric ulcer in 1926 she had been healthy all her life. Her father, mother, and sister had suffered from rheumatism, but otherwise the family history was of no medical interest; she had had seven children.

When admitted she had been using crutches for six months, and complained of stiffness and pain in the arms, legs, and back; that lifting weights hurt her; and that slight knocks produced pain. On examination the movements of the joints were good; the right tibia was bowed, and there was deformity and unnatural mobility, accompanied by pain in the upper third of the right tibia. The bones and muscles of the left leg below the knee were very tender on palpation, the trochanter of the left femur was thickened and tender, and nodules were palpable on the left ulna and the ribs in the left axilla. Apart from some myocardial degeneration the circulatory system was normal. The blood pressure was 190/120. The sclerotics were not blue and there was no deafness.

X-ray examination revealed fractures, sometimes multiple, in most of the long bones: the right ulna had three fractures and the left a single one, the radii being intact but very porotic, with only a faint cortical outline; the right tibia and fibula showed fractures about six inches below the knee-joint which had united at an angle of about 160 degrees; the right fibula had also been fractured above the ankle. The left tibia showed a fracture below the knee-joint, and several fractures were observable in the middle and lower thirds of the fibula. There was a fracture in the neck of the right femur, while the left one was intact but porotic; the hip-joint spaces were slightly narrowed. The pelvis was malacic in type, with a flattened cavity and symmetrical fractures of the inferior rami of the ischii. The vertebrae were somewhat decalcified, but the joints were clear and there was no evidence of ligamentary calcification. The skull was normal.

The fractures had healed in most instances without the formation of the normal amount of callus, the union being apparently of a fibrous nature.

Laboratory Examinations.—Serum calcium, 9.1 mg. per 100 c.cm.; magnesium, 2.2; inorganic phosphorus, 3; phosphatase, 0.89 units (normal, under 0.25); icterus index, 2 units. Suspension stability after one hour, 89 per cent.; red cells, 4,900,000 per c.mm.; white cells, 7,700 per c.mm.; haemoglobin, 62 per cent.; colour index, 0.63; polymorph neutrophils 63 per cent., eosinophils 2 per cent., small lymphocytes 23 per cent., large lymphocytes 6 per cent., monocytes 6 per cent. Urine (twenty-four-hour sample): total nitrogen, 6.2 grammes; P_2O_5 , 1.17 grammes; calcium, 0.103 gramme; magnesium, 0.084 gramme. No alkaline tide could be found, and the patient was therefore probably achlorhydric.

At the date of the examination the patient was not excreting an abnormal amount of calcium in the urine, and the Ca:P