CLINICAL STUDIES

IN

THE GLASGOW ROYAL INFIRMARY.

By W. T. GAIRDNER, M.D.,

Professor of the Practice of Medicine in the University of Glasgow.

No. I.

Bronchitis, with Slight Dropsy: Albuminuria: Hypertrophy of Left Ventricle of Heart, and Degenerated Arteries: Arcus Senilis: Relief under Diuretics, etc., well-marked Alteration in Cardiac Percussion, and in Position of Apex.—J. B., aged 47, labourer, was admitted to Ward 7, Glasgow Royal Infirmary, October 14th, 1870. This man, after having been under treatment for nearly a month, was submitted to the class for clinical examination on November 12th. A few simple questions brought out the details of a history of bronchitis, with *râles*, formerly sibilant, now mostly bubbling, in the lungs, the percussion being nearly unchanged throughout. Slight puffiness of the eyelids was then noticed, together with a certain amount of dropsy of the legs, feet, and back. The urine was then examined, and found to be of specific gravity 1.012, slightly albuminous (it had been much more so, and had contained granular tube-casts with epithelium). Dr. Gairdner directed attention to the flabby state of the muscular system, and the pallid complexion (the patient had lost two stones in weight). Upon the basis of these elementary facts tending to establish chronic organic disease, an examination was called for into the state of the organs and functions in detail.

The first fact that attracted attention in this more minute examination was the presence of *arcus senilis* in the corneæ to a considerable extent. Pursuing this line of inquiry, it was found that the anterior temporal arteries on both sides were tortuous and unduly resistant to the touch. A similar condition was discovered in both radial arteries, and, although not so distinctly, in the vessels of the thyroid axis. The superficial femoral on the left side was also distinctly indurated in the greater part of its course. These observations on the arterial system gave special importance to the examination of the heart.

In regard to the percussion of the heart, difficulties had been experienced in the earlier examinations, partly owing to the presumed overlapping of the more or less emphysematous lungs, and partly from the presence of a degree of dulness (perhaps from fluid effusion in the pleura) diffused in the left lateral region. With due care as to details, however, evidence had been obtained of a certain amount of hypertrophy of left ventricle, and the facts recorded with great care on the 1st November supplied an interesting comparison with the results of examination on the 12th.

At the former date, the cardiac apex-beat was felt most strongly in the fifth intercostal space, and more feebly in the sixth, from an inch to an inch and a quarter to the left of the vertical line of the nipple. Both these points had been accurately marked with nitrate of silver. By placing the patient on his left side, the impulse of the apex could be distinctly followed to nearly two inches to the left of the line of nipple. The left margin of the cardiac dulness, so far as could be made out, was in correspondence with the more remote of these two situations, and the upper margin passed through the nipple, affording evidence of a lowered position of the heart, or of slight pulmonary encroachment. The transverse measurement of the dulness at its broadest part was fully six inches.

In almost all these particulars, slight alterations were observed on the 12th November. The apex-beat was chiefly appreciable at a point about half an inch nearer the nipple than the nearest of the points above noticed; and in the sixth intercostal space no impulse could be detected. The percussion-dulness was correspondingly altered. The fact of the marking with nitrate of silver, and the exceedingly distinct character of the apex-beat on the second, though not on the first occasion, made the inference inevitable—either that a diminution in the size of the heart had occurred between the two observations, or that the lung, by being less expanded with air, had permitted the heart to rise up in the thorax, and so brought the apex nearer the nipple.

The sounds of the heart, though not greatly altered, and quite free from murmur, were in harmony with the idea of a certain amount of hypertrophy of the left ventricle. It was noted in the report of November 1st, that "the first sound is a little dull in tone, even at the apex, and the second is somewhat abnormally deepened in tone over the aortic

cartilage." These facts continued to be observed on November 12th. Neither the liver nor the spleen showed any distinct abnormality to percussion or otherwise. There was no fever; pulse 70.

Under the administration of cream of tartar in electuary, and of a stimulating mixture of spirit of chloroform and camphor mixture, this patient had been improving since admission to November 1st, when a partial check occurred, and the bronchitis seemed to relapse, though not nearly so bad as at first. This was gradually relieved, the cream of tartar being given in the form of a drink, the other medicine continued. During the latter part of the month of October, the urine averaged 70 ounces daily. From 1st to 6th November (relapse of bronchitis), the quantity was, on an average, 60 ounces. From the 6th to 12th November, it was 73 ounces on an average; and, at the latter date, 100 ounces in twenty-four hours. There was every reason to think that the improvement in the patient's condition had been commensurate with the increased flow of urine.

REMARKS.—In speaking of this case, Dr. Gairdner said that it was one that in dispensary practice, or under an examination hastily conducted, might very easily have passed as a case of mere chronic bronchitis; and it was therefore a very suitable one, at the commencement of a clinical course, to demonstrate the necessity of careful and thorough examination. The facts indicating disease or degeneration of the heart, arteries, kidney, and cornea, only came out on physical examination, and were by no means brought into notice directly by the statement of symptoms in the first instance. In fact, this patient, who considered himself a fairly healthy man up to the time of his bronchitic attack, is clearly proved to have a constitution organically undermined at a multitude of points, so that the failure of it altogether at no distant date may be regarded as extremely probable. In the meantime, the evident improvement under diuretics, and more particularly the curious physical evidence afforded of improvement in the condition of the heart, are worthy of especial notice. In estimating this latter improvement, however, it should not be forgotten that the over-expansion of the edges of the lungs on admission had a tendency to displace the heart downwards; and it is possible, therefore, that the altered position of the apex may not have been due to any change in the size of the organ; only in such case, the dull percussion ought to have extended rather than diminished; so that, having regard to all the facts, Dr. Gairdner inclines to the belief that the hypertrophied or dilated left ventricle had become somewhat reduced in size, and acquired a greater control over its contents; the improvement in all the symptoms proceeding *pari passu*.

CAUTIONS IN THE USE OF SURGICAL INSTRUMENTS AND APPLIANCES.*

By THOMAS GREEN, F.R.C.S., M.D. Edin.,
Consulting-Surgeon and late Senior Surgeon to the Bristol
Royal Infirmary, etc.

DURING the whole of my professional life I have been intimately connected with large hospitals, either as a student or as Surgeon to the Bristol Royal Infirmary; and it has thus fallen to my lot to see a good deal of surgery—to witness not alone what its resources can accomplish in the successful treatment of disease or injury, but also serious accidents, often fatal, occurring in the use of surgical instruments or appliances. These cases have been most useful to myself as warnings, and, perhaps, have prevented similar accidents at my own hands. To bring them before you in detail may possibly do the same service to others that their observation has done to myself.

In clinical lectures, or in those given at the Medical School, I have always endeavoured to impress on the students the necessity of caution in dealing with the canals passing from within to the different outlets of the body. When instruments are required, there is a delicate membranous tube to pass through; and to make this passage we have either a metallic instrument, or one of a different material, but nearly as hard and unyielding. If the instrument do not pass freely and easily, or if there be an obstruction to its passage, anything beyond a moderate amount of pressure or force may make it go through, not the canal, but the membranous structures of which it is composed.

Case of Tracheotomy in which the Trachea was not opened.—A child, suffering from croup, was under the care of Dr. Lyon. In consultation with a surgeon in Bristol, tracheotomy was agreed upon. The operation was at once performed; the child was not relieved, and died soon afterwards. On examination, it was found that the trachea had not been entered; the cannula lay in front and close on the rings of the trachea.

* Read before the Bath and Bristol Branch.