Chart 1.—A. B., aged 40.

Chart 2.—C. D., aged 18.

the vessels still patent at the end of a year. Patients with advanced phthisis are either in bed or on a sofa or deck chair outside if the weather permits. The hands and upper extremities are exposed and cold and the lumen of the veins small. In short, we come to the worst cases under the most advantageous conditions.

While not wishing to deter any one from undertaking the treatment, I would suggest that the busy, hardworked practitioner, with little time at his disposal, should not attempt it. Mistakes are exceedingly painful to the patient. The successful injection is painless. Pain is an imperative indication to withdraw the needle at once, and not attempt it again in that particular vein for forty-eight hours at least. So far as possible the operator should avoid using the same vein except at intervals, or, if he has no choice, he should try to avoid entering the needle exactly at the same spot. It is almost unnecessary to add that the skin over the vein to be used is treated antiseptically. It is impossible to be too careful in cleaning and rendering aseptic the syringes and needles.

The solubility of iodoform in ether is 1 in 7. The solution I use is not quite saturated. If a saturated solution is employed before the operator can get the needle into the vein some of the ether has volatilized. The needle will be found blocked with iodoform, and the plunger of the syringe probably jammed, rendering injection impossible. I begin generally with daily injections of from $\text{m} \times \text{v}$ to $\text{m} \times \text{vii}$. The solution must be introduced very slowly. With large full veins, and lungs not too much disorganized, it is possible to give very large doses. To two patients I have given at one time as much as $\text{m} \times \text{xlvi}$, representing at least 6 gr. of pure iodoform. I do not think such large doses are necessary, and the long chilling of the vein with such a big injection is apt to prove permanently injurious to it. Every vessel that becomes occluded diminishes the patient's chance of recovery. I employ the finest precipitated iodoform that can be obtained and the purest ether of specific gravity 720. Inferior forms of iodoform and ether make a solution which rapidly decomposes and liberates iodine. The solution should be made fresh if possible for each patient, and immediately before the injection, and exposed to light as little as possible. As would be expected with a large dose ($\text{m} \times \text{xliii}$ to $\text{m} \times \text{xv}$) there is frequently momentary unconsciousness, but if the earlier injections have been successful neither patient nor friends will object when told that this may possibly occur. Space does not permit of my giving drawings of the apparatus which I have devised to assist me, nor of enumerating the little details of technique which I have found necessary. These can be better shown than described.

It has been my experience that the continuous successful injection of an ethereal solution of iodoform is followed *pari passu* by an improvement in the patient's condition in every way, and that except in very advanced disease it appears to be innocuous in moderate doses. Subjoined by way of illustration are the charts of two patients. In one the whole of the upper lobe of the right lung was affected, and a cavity existed. The left apex was also the seat of disease. He has had a hundred injections at least, and is now well in every way. The left apex is now clear, and the right exhibits the physical signs of a cicatrized cavity, the remainder of the upper lobe having cleared up. He coughs very little in the morning, sputum about half a drachm in twenty-four

hours, sometimes less. Organisms still present in small numbers. During the next few weeks after the chart reproduced there were occasional slight rises of temperature, but without any untoward symptoms. Twelve weeks after beginning treatment temperature became normal, and has remained so now for six months (Chart 1).

In the other the whole of the right lung was infiltrated and breaking down, and the left apex had begun to give way. In this instance the patient has lived for years in the country under the best hygienic conditions, and the windows of the house had been open day and night all the year round. In spite of this the disease got implanted. The recovery here, too, is very remarkable. Organisms can still be found (Chart 2).

The potentiality of the method seems great, and should my experience be confirmed, it may enable many wage-earners to continue at work while gradually regaining better health.¹ That it is powerful to arrest I have now no doubt, and therefore an agent of some importance in mitigating the terrible mass of human suffering which is primarily the lot of the afflicted, and in its wake leaves too often privation and destitution the only heritage to their dependents.

NOTE.

¹ I have two patients at present so doing.

CASE OF AORTIC DISEASE WITH UNUSUAL COURSE.

By H. E. BRUCE-PORTER, M.R.C.S., L.R.C.P.,
Windsor.

MAJOR —, aged 43, married, was invalided from India with "valvular disease of heart," as his Medical Board found that he had double aortic and double mitral murmurs, and there was albumen present in the urine. In their opinion his condition was so grave that it was necessary to send a medical officer down country in charge of him. He was brought by easy stages from Marseilles, and on arrival in London I met him and took him to his brother's house, where he was to remain for a couple of days; several times during that drive of twenty minutes' duration I feared the end was coming. Breathlessness was intense and speaking was almost an impossibility, but after he had been put to bed I gave him $\frac{1}{2}$ gr. morph. sulph. with $\frac{1}{10}$ gr. atrop. sulph. which steadied his heart and, considering his condition, he had a fairly quiet night.

Next day on my advice he was seen by Dr. Pye-Smith who, after he had pointed out the great risks of a journey, consented to the patient being taken by road to Windsor. I now went into the previous history of the patient; he had always led an active life and was generally considered very healthy. About two and a-half years ago he suffered from indigestion and had palpitation. He was examined as to fitness for active service some twelve months ago and passed fit. This, however, must not be taken to mean that he was free from cardiac trouble; as I know in examining officers for foreign service army medical officers are very kind and one of the first questions put is, "Do you feel all right? and I suppose you want to go." So long, therefore, as the heart seems to be doing its work, it would be passed though the subject of a murmur, the reason being that if rejected for active service

an officer must be invalidated and this is serious to a man near the time when he may receive command of his battalion. The result of inquiries as to specific trouble was negative. His condition was as bad as could be, the breathlessness was very great and attended by anginal attacks.

When tested by Hill and Barnard's sphygmometer the maximum swing of the needle was at 200 Hg, the effects of back pressure being seen in the oedema of the legs and the size of the liver. The heart was failing, and the constant pain and the breathlessness were very trying. I gave morphine sulph., guarded by a dose of atrop. sulph., to check the restlessness, and regular doses of nitro-glycerine to lessen the resistance ahead, and so let the blood get away; hypodermics of strychnine to brace the heart muscle, an occasional blue pill and seidlitz. By the time Sir William Broadbent saw him the dose of morphine was gr. $\frac{1}{2}$ a day.

The condition of his heart is described in the note following, written for me by Sir William Broadbent, who saw him on October 21st, a month after his arrival in Windsor:

Sir William writes: "While tranquil there was no respiratory distress, but the breath was short on very slight exertion. There was considerable oedema of the legs. The pulse was large, sudden, short, and collapsing, indicative of extreme aortic incompetence; when the hand was raised the beats scarcely reached the wrist; the carotid throbs was very conspicuous. The abdomen was tumid and the liver large. The apex beat was diffuse, and could be felt in the sixth space, and could be felt as far out as the anterior axillary line; the cardiac impulse generally weak. The area of dullness was very extensive. Dullness was present from the right of the sternum from the second space downwards; the upper limit followed the third space, and curved downwards outside the nipple. At and to the left of the nipple a systolic murmur was heard, and over the heart generally a loud diastolic murmur, evidently aortic. In the right second space there was also a systolic murmur audible along the aorta and in the carotids. No aortic second sound could be heard in the neck or in the aortic area. My prognosis was extremely grave, and it did not seem to me possible that life could be prolonged till the end of the year."

The accumulation of fluid in the abdomen was so great that on October 28th I was obliged to tap him. This I did by Southey's tube, and drew off over 7 pints, when the fluid would not run freely and he was feeling the restraint of one position so much I had to remove the needle. The shock of tapping was very great, so that I felt it advisable to drain off the fluid which was, as it were, on the wrong side of the circulation, by needles in the legs.

The dose of nitro-glycerine was gradually increased till he had two tablets of $\frac{1}{100}$ gr. each every hour, and at times an extra tablet. The dose of morphine was increased till he had as much as $1\frac{1}{2}$ gr. in the twenty-four hours. The pain in the aorta was kept at bay, and he was able to take an interest in life and would not realize that his condition could be really serious. In December he had a very bad time for about a week; it did not seem possible that he could rally, and he was only kept going with inhalations of oxygen ten minutes to every hour, strychnine frequently, and brandy at times for several days.

He was drained through the legs by having two needles in each leg, and each time these needles were put in they drained over 8 pints. At the middle of December the fluid had increased so much in the abdomen, in spite of the draining through the legs, that I felt bound to take the risk of tapping the abdomen again. He was given a dose of morphine half an hour before, and a dose of brandy immediately before, I inserted the needle, and I gave a hypodermic injection of strychnine as soon as I had withdrawn the trocar. In spite of all this the patient almost died from shock and I had to rest content from that on with draining the legs.

From the start he was kept free of digestive trouble by the simple plan of separating his proteid from his carbohydrate meals. The blood pressure was steadily lowered to meet the failing heart, and at a fortnight before the end the maximum swing was at 100, and the small amount of 120 mm. Hg. pressure compressed the pulse.

The condition of the legs was one calling for anxious care, and though they were tapped over twenty-five times, and four needles used at each tapping, so well did his nurses care for the legs that they never became inflamed from the needles. The legs were washed twice in the twenty-four hours with a solution of perchloride, dried with new cotton wool, and dusted with a dusting powder containing some calomel, etc. When they showed signs of acute inflammation towards the end from the continual congestion they were dressed with thermifuge on lint.

The reason for increasing the morphine so much was that when he came quite from under its soothing influence he was

very anxious to stand up as the breathlessness came on so badly, and I knew that standing in his state meant collapse and death.

When he had been taking the chocolate tablets of nitro-glycerine for some weeks they had a tendency to make him sick, so I gave nitrite of soda as a change. By the aid of the nitrites it was possible to lower the work so much that instead of dying suddenly from the usual cause in aortic disease—failure of vis-a-tergo in the arteries, he died of the combined effect of venous stasis and failure of vis-a-tergo in the arteries. Gangrene set in in both legs on February 20th, and he had a great deal of fever as a result, the temperature going to 104° , and his pulse to 130. He was conscious up to two hours before the end, and died quite easily, 36 hours from the onset of the gangrene, without the legs becoming septic.

For months his breathing during sleep was of the Cheyne-Stokes variety. The pulse was irregular, and at times intermittent, and there was a general dilatation of the arch of the aorta. The amount of albumen in the urine never increased beyond one-eighth. The lungs were remarkably free of congestion, and at times he suffered from slight pleurisy.

The case may be put briefly as follows:

An acute aortitis caused puckering of the orifice and a regurgitant murmur, the heart for a couple of years compensated by enlargement of the left ventricle, under the strain of service in India the compensation failed somewhat rapidly, and dilatation set in; this caused leakage at the mitral orifice and the usual back pressure began to tell.

According to the textbooks and most observers the advent of a mitral lesion in aortic disease is looked on as a sign that the end is near at hand, especially when albumen is present in the urine, yet in this case he lived on in a state of comparative comfort for over six months, and during the last five months he had not more than three attacks of angina.

The amount of morphine that was given without a single untoward symptom was I think worthy of note; towards the end it was possible to reduce the morphine to $\frac{1}{2}$ gr. a day for days at a time. He was unable to sleep, except in a sitting position.

The pulse tracing was taken early in October, and shows a sudden fall to almost the base line.

CASE OF ACROMEGALY.

By W. B. HUNTER, M.D.,
Londonderry.

SINCE but few cases of this disease appear to have been reported as occurring in Ireland, notes of the following case may be of interest:

History.—Early in April, 1903, the patient presented herself at the Londonderry Eye, Ear, and Throat Hospital, complaining of defective sight. She was found to be suffering from old iritis in both eyes, and, though I observed at her first visit the unpleasant condition of her face, the thought of the true nature of that did not occur to me until I observed her hands at a subsequent visit when she had no gloves on. Having examined the hands, it was easy to see the nature of the case, and then, of course, the old iritis lost much of its interest and consideration. Of the two photographs of the patient, one was taken before the disease was supposed to have started, and the other quite recently. The case is thought to date from twelve or fourteen years ago. On looking back, the patient and her friends think they noticed some change about that time in the facial expression, and that the usual sizes of her gloves and boots were found in some way to be too tight and too small. They are able to assign the time by reference also to other collateral events and associations. The patient can ascribe no cause for what has so slowly eventuated in her present condition—no fright, or mental or bodily strain, no emotional disturbance or accident. Her family history gives no clue, unless that there be some connexion between her disease, and her father dying suddenly from heart disease and her mother of "dropsy." The patient, has never been married, and is now in her 65th year. She says menstruation stopped before she was 50, but that three years after this event she was affected with a sudden and copious recurrence, almost like "a flooding," which lasted three days, and since then there has never been any return. Whether there is any connexion between this condition and the commencement of the disease cannot well be affirmed, and perhaps not emphatically denied. She complains that her general health at present is very poor and