surrounding tissues. There are the usual masses of lymphoid tissue associated with it. There is no evidence of tubercle or new growth.

Even if, at the second operation, we had definitely known the nature of the case, it would have been practically impossible to dissect out the wall of the cyst, owing to the size of the latter, and the fact that it extended forwards deeply into the anterior triangle, so as to be almost in contact with the pharynx. Therefore the treatment adopted was probably the best in the circumstances, even although a further operation was necessary to complete the cure.

There was no obvious cause why the cyst should suddenly enlarge and "suppurate" (the fluid was not true pus), unless the fact of pregnancy occurring had any bearing on the matter.

The report of the Clinical Research Association, together with our knowledge of the anatomical relations and the nature of its contents, confirm us in the view that this was a branchial and not a dermoid cyst.

TWO CASES OF PENETRATING WOUND OF THE HEART TREATED BY OPERATION.

BY

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It has been my lot to have the opportunity of operating on a penetrating wound of the heart on two separate occasions within such a short space of time as three months; I am therefore happy to be able to place before my colleagues the details of such an uncommon experience in the hope that they may prove useful to some and interesting at any rate to others.

CASE I.—*Penetrating Wound of the Left Ventricle: Operation Two and a Half Hours after Injury: Complete Recovery.*

Whilst acting as Resident Surgeon at San Fernando Hospital, Trinidad, B.W.I., on October 19th, 1912, I was hurriedly summoned, about 3.15 p.m. to see a case just brought in and reported to be dying. I found the patient to be a well-nourished coloured boy, aged 14, suffering from severe shock and haemorrhage apparently caused by a small stab on the left side of the chest.

History.

The following history of the wound was obtained: About 1.30 p.m. on that day he was in the street just near his house playing at "rounders" with his friends, when, on stooping hurriedly to pick up the ball, the handle of an ice-pick (an instrument similar to the large blade of an ordinary penknife fitted on to a wooden handle about 4 or 5 in. long) which he had in his left coat pocket, pressed hard against the front of his left thigh, thus driving the blade into his chest. On rising he felt some sort of pain in his chest, and to his surprise saw the ice-pick securely stuck in his side. This he forcibly withdrew, and for a few minutes felt none the worse, but, as he was bleeding from the wound, he hurried to his house to remove his blood-stained clothing. The pain over his heart now became very severe, and he could breathe only with difficulty, and, as his condition seemed to be rapidly getting worse, he was put into a cab and quickly brought to the hospital, where he arrived as before mentioned in a moribund condition about one and three-quarter hours after the accident.

State on Examination.

He was cold and collapsed, with large beads of perspiration on his forehead, and the pulse could hardly be felt at the wrist. There was acute dyspnoea, and he was extremely restless, and insisted on lying on his left side, as he felt he would die if made to lie on his back. The stab was a small vertical penetrating wound about one-third of an inch long, situated between the fifth and sixth ribs on the left side of the chest, about one inch within the nipple line, and extended in an upward and backward direction, but with a probe no opening into the chest wall could be discovered. The area of cardiac dullness was definitely increased, but the heart sounds could be heard fairly distinctly. There was no haemorrhage from the wound.

Diagnosis.

The position and direction of the wound, the severe shock and signs of internal haemorrhage, the increased area of cardiac dullness, the intense dyspnoea, and the absence of haemoptysis and cough, all pointed to an injury of the heart. Hot water bottles were quickly procured, and a warm saline enema with 15 drops of adrenalin given, while strychnine gr. $\frac{1}{4}$ and adrenalin $\text{m} \frac{1}{2}$ were injected hypodermically, and the

patient was put to lie on his left side, with his head low. I also gave instructions to get the operation theatre and all necessaries ready as quickly as possible in case there should be no improvement in his condition.

Operation.

About 3.50 p.m., as the patient showed no signs of improvement and was, in fact, fast sinking, I decided on operating at once. An intravenous infusion of normal saline with 10 drops of adrenalin was given, but the fluid flowed extremely slowly and only about $\frac{3}{4}$ ij could be infused altogether, this, no doubt, being due to the failing circulation. The area around the stab was infiltrated with about $\frac{3}{4}$ ij of a solution of cocaine and adrenalin in normal saline (cocaine gr. j, adrenalin $\text{m} \frac{1}{2}$, normal saline $\frac{3}{4}$ iv) and the wound prolonged upwards and downwards. The opening into the thorax between the fourth and fifth ribs now became clearly evident, and a probe which was inserted was seen to move with the heartbeats, thus confirming the diagnosis. As the patient was now having great pain and seemed very distressed, Dr. Greaves, assistant surgeon to the hospital, administered some chloroform, but after a few minutes respiration ceased and the pulse could no longer be felt. Artificial respiration was immediately resorted to, a capsule of amyl nitrite given as an inhalation, and an injection of strychnine and digitalis given hypodermically. The case now seemed quite hopeless, but after about three minutes voluntary respiratory movements could again be detected. I therefore hurriedly continued the operation, and exposed the fourth and fifth ribs, and with a pair of rib scissors cut away their costal cartilages. At this stage the patient became very restless, and seemed to be in great pain, necessitating the administration of a little ether by the open method. The pleural cavity was rapidly exposed, and a quantity of clots of bright red blood escaped with every movement of respiration, and for a time neither the pericardium nor the lung could be seen. I quickly removed the clots and swabbed out the cavity as far as possible. The pale, collapsed left lung now came into view in the upper part of the wound, and was hurriedly examined, but no injury was found. I then pulled up the pericardium with a pair of Spencer Wells forceps, and at once saw a small hole, through which bright arterial blood was slowly pumping.

This opening was immediately enlarged sufficiently to allow of a thorough examination of the heart, large clots were removed from the pericardial cavity and the apex of the heart was seized with a pair of Spencer Wells forceps and pulled half out of the thorax, when a vertical penetrating wound of the left ventricle about $\frac{1}{2}$ in. long was seen near the interventricular septum about half-way between the apex and the aorta—pumping bright arterial blood with every contraction of the left ventricle.

I hurriedly stitched this with some very fine silk by pulling the heart well out of the thorax with the forceps, thus steadying it sufficiently to allow the stitching, but on relaxing the heart once more the pumping was noticed to be still going on. The stitches had been too tightly inserted, and had cut through the muscle of the left ventricle, making the opening larger than before. I therefore removed these stitches and used rather thicker silk, pulling less tightly and taking great pains that the stitches should not enter the ventricular cavity for fear of thrombus formation. It was necessary to insert five interrupted sutures before the haemorrhage could be checked. During this procedure, which lasted quite twenty-five minutes, the anaesthetist noticed that the patient's pulse was very much stronger and he was taking the ether well. The removal of the blood from the pericardial cavity, and the stimulation of the heart by the forceps and stitching had evidently markedly improved the heart beats.

It is interesting to note here that whilst the heart was being pulled on to enable the stitches to be inserted, the beats gradually diminished and weakened, but immediately returned to the normal on being relaxed into the thorax.

As soon as I had satisfied myself that the wound was securely sutured and there was no more danger of haemorrhage, the pericardial cavity was thoroughly irrigated with normal saline and all clots removed, and the opening into the pericardium was stitched with catgut. The pleural cavity was then also thoroughly irrigated and all clots removed, and the pleura and pectoral muscles

stitched with silk across the gap formed by the removal of the fourth and fifth costal cartilages. The skin incision was then brought together with silkworm gut sutures (no drainage tube or gauze being left in), the dressing applied, and the patient hastily returned to his bed and laid flat on his back.

Progress.

The patient's condition had definitely improved after the operation, but the dyspnoea was still urgent and he was experiencing great pain over the heart, which had to be relieved by hypodermics of morphine at intervals. Saline $\frac{3}{4}$ x and adrenalin m v were also given per rectum hourly for four hours and then two-hourly throughout the night, and he was able to take small quantities of warm milk and brandy at short intervals. The following are notes of the further progress of the case:

October 20th (the day following the operation). He was positively better; respirations 36, pulse 148 and regular. The dyspnoea was much lessened by propping with a head-rest, and the pain relieved with hypodermics of morphine and an icebag, which latter was kept over the heart continuously for the next five or six days.

October 22nd. There was distinct pericarditis of the dry type, which gradually spread over the whole cardiac area, the heart sounds being at no time muffled. The pneumothorax on the left side caused by the collapse of that lung at the time of operation persisted until about October 27th, after which there was some dullness behind, probably due to a small pleural effusion. Slight pleural friction could be heard for a few days after the operation.

October 26th. The skin stitches were removed and the wound had almost healed.

October 30th. The patient seemed altogether out of danger, and he was allowed to take a good meal. Temperature 98.4°, pulse 96, respirations 24. The heart sounds were perfectly clear and the pericarditis had quite disappeared. About 5 p.m. on this day he was suddenly seized with acute abdominal pain over the right side of the abdomen, nausea, vomiting, and collapse, and there was no pulse at the right wrist, the right hand feeling quite numb. An icebag was kept over the abdomen and heart, and morphine, strychnine, and digitalis given hypodermically. About 9 p.m. the pulse was appreciable at the elbow and he was resting quietly.

October 31st. On this morning the pulse at the right wrist could not only be felt but was definitely stronger than that at the left wrist, and his condition was still serious. The nausea and vomiting continued throughout the day, and the pain seemed to become localized over the right kidney, and on November 1st the urine was found markedly albuminous, but no red blood corpuscles were found on microscopical examination.

November 3rd. On this day the pulses were about equal and the patient seemed comparatively well, but the albuminuria was still marked and continued for some weeks. Embolism of the right radial and renal arteries seems to be the only satisfactory explanation of the above symptoms, caused no doubt by the dislodging of emboli from a clot over the wound in the left ventricle probably brought about by a full stomach after the first heavy meal.

November 7th. His condition gradually improved, but by this date the temperature had become definitely septic, and the left base was explored; no fluid was found, but the pleura felt very much thickened.

November 10th. The patient complained for the first time of a swelling over the site of an intramuscular injection of quinine given on October 22nd, and on incision a fairly large abscess, deep down in the muscles of the thigh, was opened and drained.

Result.

By November 18th the abscess wound had healed and the patient was rapidly gaining strength, and on December 7th he was discharged from hospital as cured. I am much indebted to Dr. Turpin, resident surgeon of the hospital, who kindly supplied me with his notes of the case from November 12th (when I was transferred to Port of Spain Hospital) to the time of the patient's discharge from hospital.

I had an opportunity of seeing the patient on December 17th, and found his condition as follows: He was well nourished and showed no symptoms of cardiac trouble;

there was no palpitation, pain, or dyspnoea, and he was able to walk about without any discomfort. (I had advised him not to attempt any running or violent exercise for a few months.) The scar had been replaced by a keloid; the apex beat was over the sixth rib in the nipple line and the space between the excised costal cartilages was not visible on inspection, the distance between the cut ends being only about $\frac{1}{2}$ in. The mitral, aortic, and pulmonary sounds were quite clear and no murmur could be heard. On percussion the area of cardiac dullness was very little, if at all, increased. The lungs seemed normal, except for a slight impairment at the left base behind, probably due to some thickened pleura.

On March 3rd, 1913, the patient again came under my observation, and I am happy to be now able to report his "complete recovery." He looks well, and has obviously put on a considerable amount of weight since last I saw him. The apex beat is in the fifth interspace, well within the nipple line. The area of cardiac dullness seems quite normal, and the aortic, pulmonary, and mitral sounds are perfectly clear and distinct. The pulse is 92, regular, and of good tension. The urine still contains a trace of albumen.

He has been attending school since January, and assures me that he is now able to run at top speed, and walk up and down hill with very little discomfort, though he thinks he is not yet able to do quite as much as he could before the accident.

CASE II.—Penetrating Wound of Right Ventricle: Operation Five Days after Injury: Death.

A. M., a well-developed coloured boy, aged 15, was admitted at 4.35 p.m. on January 1st, 1913, into the Colonial Hospital, Port of Spain, Trinidad, B.W.I., by Dr. Proctor, Assistant Surgeon to the Hospital. The history obtained was that he had stabbed himself with a knife during an altercation with his father about half an hour previously, since when he had been bleeding profusely from the wound. The patient remained during the next five days under the care of Dr. Proctor, who has been kind enough to supply me with the following notes.

State on Admission.

The patient was cold and collapsed, and sweating profusely, there being no pulse at the wrist. There was a small bleeding punctured wound over the third left costal cartilage near the sternum extending backwards and downwards and slightly inwards for about an inch. This was carefully probed, but no opening into the chest wall could be made out. The heart sounds were feeble, but there were no murmurs, and the area of cardiac dullness was not increased. The lungs were normal.

A mixture of ether, strychnine, and ammonia was administered at short intervals, and about 2 pints of normal saline with 10 minims of adrenalin given two hourly per rectum, and about 1 pint of normal saline infused under the breasts. The wound was dressed and firm pressure applied, but as the haemorrhage continued, the area around was infiltrated with a solution of cocaine and adrenalin, and the stab wound enlarged, but no bleeding point could be found; however, after tightly packing the cavity with gauze the haemorrhage was checked.

By 9 p.m. the patient's condition had slightly improved, and the pulse was now perceptible at the wrist. On the next day (January 2nd) he seemed much better, and had a fairly good pulse—there had been no further haemorrhage.

Progress.

On January 3rd and 4th the improvement continued and the patient seemed quite comfortable. The temperature had remained normal since after admission, but on the evening of the 4th it registered 100° F.

On January 5th there were a few crepitations at the left base and some indefinite signs over the left lung in front; the heart seemed normal. The patient now felt comparatively well and was found out of bed on several occasions, though persistently warned that he must on no account leave his bed.

On the morning of January 6th some secondary haemorrhage occurred from the wound, which had to be repacked with gauze wrung out of adrenalin, and for the first time since admission the area of cardiac dullness was noticed to be definitely increased. There was also acute pain over the pericardium, and the pulse had become weak and rapid. Normal saline and adrenalin were given per rectum two-hourly, and strychnine and digitalis injected hypodermically.

This day, about 1.30 p.m., he was reported as having got suddenly worse, and I was called to see him. I found him restless, cold, collapsed, and sweating, with a running pulse at the wrist, and suffering from acute dyspnoea of a panting nature. The area of cardiac dullness extended from the third to the eighth rib, and there was definite pleuro-pericardial friction near the wound on the left side. There were crepitations at both bases, but no signs of fluid. There was no external haemorrhage going on.

Diagnosis.

From the direction of the wound, the sudden increase of the area of cardiac dullness, and the restless collapsed condition of the patient, I concluded that there must have been a penetrating wound of the heart of a valvular nature which had closed down shortly after the injury owing to the feeble contractions of the heart brought about by the extreme loss of blood, most of which had drained out of the pericardial sac and through the external wound. As the patient recovered, however, and the cardiac contractions became more forcible, some secondary haemorrhage occurred from the stab wound in the heart (probably brought about by the patient's exertion in getting in and out of bed), but as the external wound was now closed, all the blood remained in the pericardial cavity, thus causing the symptoms which were now present. In the circumstances, and as the patient was rapidly growing worse, I decided on operating at once, with a view of stitching the wound in the heart and arresting the haemorrhage, this seeming to give the only possible chance of recovery.

Operation.

About 3 p.m. the patient was brought to the operating theatre in a wheel chair and placed on the table in a semi-recumbent position. The whole area around the wound had been thoroughly infiltrated with a solution of cocaine and adrenalin ($\frac{1}{2}$ per cent. of each) in normal saline solution, about twenty-five minutes previously.

An incision about $4\frac{1}{2}$ in. long was now made, starting from the second left costal cartilage going through the stab wound in an outward and downward direction and ending about the sixth rib within the nipple line, thus exposing the third, fourth, and fifth costal cartilages and the intercostal muscles in connexion with them. A careful examination now revealed a punctured horizontal wound, about $\frac{3}{4}$ in. in breadth, between the fourth and fifth left costal cartilages near the sternum, which, on probing, was found to pass in a backward, downward, and slightly inward direction for a distance of about $1\frac{1}{2}$ in. to 2 in., the probe moving up and down with the heart beats, which could be distinctly felt. On removal of the probe, a great quantity of dark venous blood immediately welled up from below. The diagnosis of a punctured wound of the heart having been now definitely confirmed, the operation was continued.

The fourth and fifth left costal cartilages were completely exposed, the intercostal muscles attached to them above and below separated, the pleura freed from their under surfaces, and with a pair of rib shears the cartilages were cut away sufficiently to allow of a complete examination of the pericardium and heart. At this stage the patient became very anxious and restless, and insisted on having an anaesthetic. Ether (by the open method) was therefore administered, and after about four minutes the operation was proceeded with and the pleura incised. There was an immediate rush of air into the pleural cavity as the left lung collapsed into the upper part of the thorax, exposing an extremely distended pericardial sac occupying the greater part of the left side of the chest. The pericardium was found extremely thickened and inflamed, and was incised for about $3\frac{1}{2}$ in., allowing a quantity of dark blood to escape from the pericardial cavity, which was quickly swabbed out, when some fairly rapid venous oozing was noticed to be going on. There was well-marked pericarditis over the visceral pericardium, and the heart muscle was felt to be much softer than normal, probably due to myocarditis.

The left ventricle was now thoroughly examined, but no wound could be discovered, and as the direction of the stab and the venous condition of the blood pointed to a wound of either the right ventricle or right auricle, it became necessary to make as complete an examination of these compartments as possible. The apex of the heart was, therefore, carefully seized with a pair of Spencer Wells forceps and an attempt made to pull the heart out sufficiently to allow of this examination, but this proved impossible, as the tissue was very soft and yielded to the slightest pressure or pull. A silk suture was then passed through the apex of the heart and a further attempt made to pull it out by this means, but this also proved unsuccessful, as the silk cut through the muscle very easily, setting up a fairly smart haemorrhage, which, however, was quickly controlled by means of three interrupted sutures. As the haemorrhage, however, still continued from the stab wound, some very hot saline was poured over the heart, but this too failed to have any effect. By this time the patient's condition was very grave, and all attempts at getting at the source of the haemorrhage had perforce to be abandoned. An intravenous saline infusion was at once started and the heart beats seemed

to improve for a while, the pericardium and pleura being meanwhile stitched with catgut and the pectoral and skin incision brought together with interrupted silkworm-gut sutures. Before the stitching had been completed, however, the patient expired.

Post-mortem Examination.

On the next day a post-mortem examination was held, and, as anticipated, a punctured horizontal valvular wound, about $\frac{1}{2}$ in. long, of the right ventricle about half-way between the apex and base of the heart was found penetrating into the ventricular cavity. The stab had gone through the chest wall directly into the pericardial sac without penetrating the pleura, and there was a fair amount of extravasated blood beneath the sternum along its whole length. The lungs showed some congestion of the bases and there were some old pleuritic adhesions on both sides. The other organs seemed normal.

Conclusions.

In the light of the experience gained from these two cases, I venture to put forward the following conclusions and suggestions:

1. A great many cases of penetrating wounds of the heart might easily escape recognition if too much reliance be placed on the failure of the probe to enter the thoracic cavity; but when it is borne in mind that a stab wound (made often with the *thin* blade of a knife) in that position usually has to traverse several layers of muscles, the fibres of which run in various directions, it can easily be conceived how difficult it would be to detect the opening into the chest by means of a probe. I think that all such wounds in the vicinity of the heart which give rise to symptoms of shock and collapse (even in the absence of other signs, such as an increase of the area of cardiac dullness, etc.) should be immediately enlarged and the thoracic walls sufficiently exposed for a thorough examination for a possible wound of entry, which, if found, would necessitate an immediate operation.

2. It is not usually known that the proportion of recoveries amongst the 124 cases recorded of operations of suture of the heart after injury is as high as 40 per cent. (vide Thomson and Miles, *Manual of Surgery*, 1909); there seems little doubt, therefore, that the proper treatment for all such cases rests with the surgeon and not with the physician, who up to now holds such strict monopoly of the chest and its contents.

3. The choice of suture—that is, catgut or silk—for the heart wound seems to me of paramount importance, and it is strange that such little attention is paid to it in the various textbooks. My former esteemed professor, Mr. Waring of St. Bartholomew's Hospital, for instance, recommends in his *Manual of Operative Surgery* interrupted sutures of catgut, whilst in the *Manual of Surgery*, by Thomson and Miles, 1909, "interrupted sutures of fine silk or catgut" are recommended. As to the use of ordinary catgut, I feel quite certain that it is unsafe, as it is too elastic and does not hold sufficiently long to ensure firm union between the edges of a muscle which is continually contracting and retracting. Iodized or chromic catgut, however, which lasts a great deal longer, may, I think, be used with safety, but I very much prefer, and can see no reasonable objection to, the use of thin silk applied not too tightly. Excellent results are obtained by the use of such silk in abdominal operations in which sepsis can certainly not be excluded, and I feel sure that the great power of absorption of septic matter possessed by the peritoneum is also possessed to the same degree by the pericardium. Should the wound be an obviously septic one, I would, of course, prefer chromicized or iodized catgut.

4. The selection of the ribs to be removed seems to me also an important consideration. Complete exposure of the pericardium and heart can easily be obtained by removing the fourth and fifth costal cartilages—instead of the fifth and sixth, or fourth, fifth, and sixth as recommended by some—thus leaving the sixth rib in position as a support to the heart when the patient is in the erect position.

5. I note that most writers lay much stress on the necessity of trying to avoid opening the pleural cavity—no doubt for fear of causing a pneumothorax. In both my cases the pleural cavity was opened and a pneumothorax caused, and I must confess that, in spite of their very grave condition at the time of operation, their symptoms were not aggravated by this procedure. My first case shows how quickly and completely such

a pneumothorax can be recovered from. On the other hand, there are two distinct advantages in opening the pleural cavity. In the first place, owing to the collapse of the lung in the upper part of the thorax, the pericardium and heart are more completely exposed, and the operation thereby much facilitated; and, secondly, it permits of a thorough examination and cleansing of the pleural cavity from all blood clots, which one can never exclude with certainty, the pleura being in most cases wounded at the same time as the pericardium.

6. As regards the after-treatment, in addition to the usual treatment for haemorrhage an icebag kept over the heart continuously and hypodermics of morphine are extremely useful adjuncts for allaying the distress and pain. Complete rest in bed for at least three weeks after the injury must be thoroughly enforced for fear of embolism.

7. With regard to the "incision," I note that the trap-door method first used and described by Parozzani in Italy is recommended by some. This consists in making a horizontal incision along the fourth interspace dividing the superficial structures and the pleura, and a second incision vertical to this, dividing also the fifth, sixth, seventh, eighth, and ninth ribs, thus forming a trap door the hinges of which are the rib cartilages. I can see no necessity for such a radical procedure. The ordinary straightforward incision gives ample room, which could be further increased if necessary by making transverse incisions at right angles to it as suggested by Waring.

In conclusion, I have to thank the Surgeon-General (Dr. H. L. Clare) for his kind permission for the publication of this report.

THE NASCENT IODINE TREATMENT OF LUPUS NASI.

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AN article appeared in the BRITISH MEDICAL JOURNAL of March 23rd, 1912, describing Dr. Pfannenstill's method of treating lupus and laryngeal tuberculosis by means of nascent iodine. As the results obtained in those instances were so satisfactory as compared with other methods of treatment, it was thought that it might with advantage be employed in a case that had hitherto resisted treatment. The patient selected was a definitely tuberculous girl 12 years of age, who in addition to lupus nasi had tuberculous kyphosis and scoliosis of nine years' duration, and had also at one time suffered from a tuberculous ulcer on the wrist which had healed rapidly under tuberculin treatment. Further, she had reacted strongly to the von Pirquet and the subcutaneous tuberculin tests.

These details are recorded because when Dr. Pfannenstill's report was first published the point was raised whether the cases cured by him were actually tuberculous and not syphilitic.

In this case, then, there was no doubt as to the diagnosis, for though Wassermann's test was not applied, there was no evidence obtainable that the lesion was syphilitic.

When the nascent iodine treatment was first instituted, she had been under the influence of that form of tuberculin known as B.E. for a period of six months, having begun with a dose of 100,000 mg. hypodermically, and had attained to so large a dose as $\frac{1}{4}$ mg. without, however, its having exerted any appreciable effect upon the course of the disease. The technique employed in this instance was slightly modified, chiefly in the direction of simplification, as follows:

1. Instead of two solutions, only one was used; it consisted of 1 pint of a 3 per cent. solution of 10 volume hydrogen peroxide, to which had been added 1 oz. of acetic acid (B.P.).

2. The solution was applied hourly instead of every few minutes.

3. A spray was employed to make certain of attacking that portion of the disease that lay within the nasal cavity.

4. A "nosebag" of lint was extemporized to keep the gauze and gauze plugs in position.

5. Poultices were applied to remove the crusts before beginning the treatment, and were also resorted to at intervals during the course.

After treatment for a fortnight the patient was obviously much improved both in her local condition and in her general health. Up to this point the tuberculin injections were still being employed; these were now discontinued, and it was noted that during a period of one week the disease remained stationary. The injections were accordingly resumed, and benefit again began to accrue.

From this time onward the patient made steady progress until, eight weeks from the commencement of the treatment, the diseased surface had completely healed over with soft, smooth scar tissue, and the cure was complete.

It was thought advisable, however, to continue the administration of the sodium iodide and the tuberculin for a few days longer; but instead of the peroxide solution an application consisting of linimentum camphorae ammoniatum, with the addition of some tinctura capsici, was used locally as a counter-irritant. The peroxide was discontinued because it was considered probable that, the patch having healed, the solution was not being brought into actual contact with the disease should it be lying deeper. The sodium iodide, which was given in doses of $7\frac{1}{2}$ grains by the mouth every four hours, did not produce any symptoms of iodism, nor was the latent phthisis aggravated by the treatment.

The patient, on being discharged, was instructed to report herself at once should the disease show any signs of fresh activity, but up to the present time—that is, two months later—this has not occurred.

The question that naturally suggests itself in this case is: Was the cure due to the nascent iodine treatment alone or to its use in conjunction with tuberculin?

On the one hand is the fact that six months' treatment by means of tuberculin alone had no effect upon the disease, which, on the contrary, continued to spread. And, on the other hand, when the tuberculin was discontinued, the disease remained stationary.

A reasonable explanation would be that the hydrogen peroxide merely acted as a counter-irritant, causing a local increase in amount of the antibodies produced by the tuberculin, whilst the iodide helped by exerting its usual beneficent influence on a strumous condition. In support of this contention may be cited the manner in which tuberculous glands often melt away under tuberculin injections combined with the local application of suction cups.

Whatever the explanation may be, the result was so eminently successful, both as regards cure and cosmetic effect, that the nascent iodine treatment of lupus calls for a wider publicity and a greater usage than it appears to have gained in this country.

I am indebted to Dr. H. Willoughby Gardner, Senior Physician of the Salop Infirmary, for his kind permission to publish the notes of this case.

THE Berliner Auskunfts- und Fürsorgestellen (Organization for Inquiry and Care), under the direction of Geheimrat Pütter, of the Charité Hospital, is one of the most beneficent institutions for the poor sick inhabitants of Berlin. Aid is given to people suffering from lung diseases, cancer, and to inebriates. It is particularly difficult to assist the latter and their families, as the authorities have very little power in such cases. Legally a drunkard can only be taken to the workhouse if he is so much addicted to drink and loafing that he is neither able to support himself nor those dependent on him and if public charity has to be called upon. As long as a drunkard is doing some work, be he treating his family ever so ill, no legal proceedings can be taken against him, and even the police are powerless unless some actual mischance has occurred. In cases like this the organization exerts its influence. Only a small percentage are cured of their drinking habits and brought back to regular work, but in about 50 per cent. of all cases the efforts to improve the impoverished circumstances of the families have been successful. Of the 1,277 cases of drunkenness which in 1912 became known to the organization, 60 were under the age of 30, 497 between 30 and 50, and 275 over 50 years old. The age of 445 could not be ascertained. Only 3 out of 1,277 were women.