collected in the vessel in bed, and there was no urine in the dressings. The abdominal wound was thoroughly irrigated with 1-6,000 perchloride solution, and strips of iodoform gauze were packed into it. The bladder was also irrigated with boric lotion. Her condition was favourable; temperature 98.4°, pulse 108. She complained of thirst. On April 24th a small fistula appeared between the two outer stitches at the left end of the rupture, and a condition of cystitis was also present. She was put upon urotropin and the bladder, in addition to the daily irrigation, had 4 oz. of a 4 gr. to the ounce solution of silver nitrate injected and held in for a minute or two. Two further sutures were easily inserted to close the fistula, and no further trouble from leakage took place. Some pus was still found to come from small pouches underlying the muscular walls of the abdomen, no doubt due to the agency of the decayed transversalis fascia, and these had to be kept clean and packed with iodoform or cyanide gauze until they healed from the bottom outwards. As these pouches were healing up the bladder wound also healed, and all the stitches that had been inserted in the bladder were removed. Granulations had formed rapidly, and considerable contraction of the abdominal wound had taken place. Micturition was re-established, the urine was clear, contained no albumen, and was faintly acid. Her appetite was good, and she was regaining flesh. Urotropin was not considered necessary.

Third Operation.—On May 25th I essayed to close the abdominal wound, and for this purpose she was anaesthetised, and several stitches were introduced after paring the edges. Two of these sutures of stout silk were passed through the whole thickness of the cut rectus ends, and fastened through the eyes of two buttons of solder prepared for the purpose. The buttons were each $1\frac{1}{2}$ in. long, $\frac{3}{4}$ in. broad, with $\frac{1}{2}$ in. between the eyes, and strong enough not to bend. Sickness and vomiting for twenty-four hours followed this attempt, and the result, which one might have expected, was vitiated by the vomiting, for it tore the rectus ends apart. The wound became septic again, and all the sutures were removed in a week. The urine became cloudy and alkaline, chiefly from phosphates and mucus, but contained no albumen. Salol in 10-gr. doses was administered every three hours until the urine was dark-coloured. On June 2nd the temperature shot up to 104.2°. On June 4th large quantities of albumen appeared in the urine, as well as proliferating epithelium from the bladder, ureter, and probably also from the pelvis of the kidney, but no tube casts were found. Urotropin was substituted for salol on June 6th, of which she took in two days 1 oz. Her usual quantity was 1 oz. in four days. The urine had a decided smell of formalin. On June 13th the urine contained albumen, but only a faint cloud; there was more on June 14th, and on the 15th there was a considerable quantity with tenderness all along the right ureter to the kidney, but no tenderness on the left side. These symptoms gradually subsided under the influence of urotropin, until at the end of the month there was only a faint cloud given with nitric acid (contact method). On June 26th I scraped the abdominal wound, pared the skin thoroughly off the edges, washed with oil of turpentine, and carbolic lotion and then inserted two strong steel skewers parallel to one another, one in the lower, the other in the upper lip of the wound $\frac{1}{2}$ in. from the edge and deep in the tissues (the original vertical incision was practically closed). With sutures I brought the edges of the wound into apposition, then bound the skewers together at their extremities firmly in order to secure a good broad union. There was no sickness afterwards, and the temperature and pulse in the evening were respectively 98° F. and 84, just as they had been for several days previously. Union took place rapidly and in a week I removed the skewers. The result is excellent, and so far as one can make out by palpation, the body wall is quite intact, there being at present no thinning of the tissue over the scar and no bulging. She went for a prolonged holiday on leaving the hospital, and when she returned she looked as well as ever she did in her life. I examined the urine on November 18th, and there was not a trace of albumen or anything to indicate that the urinary organs were not in perfect condition.

It is to be regretted that the rent in the bladder was not closed at the first operation, as this would in all probability have prevented the subsequent septic condition of the urinary tract. Still, it is difficult to see how this could have been done with the patient in such a collapsed state, for it would have entailed a prolonged anaesthesia, which she was too weak to undergo. The operation might have been done earlier, but this was a criminal case, and it took a long time to get through with the necessary legal proceedings, as well as to procure the consent of the patient and her parents to any operative interference. It is also to be regretted that the administration of urotropin was stopped when it was, for if it had been continued some time after it was thought to be unnecessary, it is just possible that the second incidence of sepsis of the urinary tract might not have occurred, and the first operation for closure of the abdominal wound might have been successful. However, it is fortunate that the patient could stand the urotropin in large doses so well; she took altogether of this substance 24 oz., and at no time was there any irritation caused by it. If haematuria had resulted upon taking urotropin, it would have been next to impossible to find another drug which would have had such a potent influence for good upon the septic condition of this system.

In conclusion, I would like to express my thanks to Drs. B. and C. Crawshaw—Dr. C. Crawshaw was the anaesthetist

on each occasion—and to Drs. William and H. Deans, who by their counsel and assistance rendered every aid in what was a most trying and wearying case; and in addition I would tender my thanks to Miss Horsfield (matron of the hospital), whose vigilance and unremitting care so materially added to the success of the case.

THE OPEN-AIR TREATMENT OF SYPHILIS.

By E. H. DOUTY, M.A., M.D.CANTAB., M.D.LAUSANNE, Davos-Platz.

I CANNOT remember ever to have seen the open-air treatment of syphilis advocated in any of the many journals of our own country or of other countries; and yet there is, I venture to think, no argument brought forward in favour of the open-air treatment of tuberculosis that is not equally to the point with regard to early syphilis. I suppose that there are a great many, medical men and others, who because they have not thought about it have an idea that the open air has some direct influence on the lung tissue in consumptives, just as, I find, there are very many who believe that the cold of these Alpine heights has direct effect on the lung tissue, and on the bacilli in it.

But a little thought will show them that it is not the influence of open air on the lungs which brings about the cure of pulmonary tuberculosis, but that it is the influence of the pure air and sunlight on the blood, and through it on all the other tissues of the body, and chiefly the nervous tissues, that the good results are obtained. Fresh air heightens metabolism in every way, and raises all the tissues to their highest point of resistance, so that they do not succumb to the persistent attacks of the poisons constantly carried hither and thither by the circulating blood.

The nervous system responds the most readily to the purer and richer pabulum brought to its inmost recesses by the blood, and as its cells are better nourished, so its trophic influence is maintained, and the metabolism and growth of all tissues, including the all-important haemopoietic, is ensured and maintained at its highest, and they are thus enabled either actively to beat off, or passively to refuse to succumb to, the specific poisons of any disease. Open-air life improves the appetite, and, again, the additional food ingested improves the blood pabulum, with the results referred to above. Carefully graduated exercise, again, increases the appetite and stimulates the emunctories, and helps the elimination of their excreta. Rest—much rest—carefully prescribed at suitable times and under correct conditions, again helps much.

And if this can all be done away from home surroundings and worries, in a high, dry, bracing climate, with the purest possible air, with pleasant companions and environment, the greater will be the efficacy and permanency of the whole treatment.

Open air, then, rest, high feeding, graduated exercise, and, if possible, a bright, dry, bracing climate, are our means for enabling an individual to escape the eventual horrors of consumption. But all and each of these are, in my opinion, as important in enabling the individual to escape the eventual horrors of syphilis (with the help of small doses of mercury maintained for many years).

The parallel is strict. The poison—whether it be a bacillus, or a ferment, an enzyme, a toxic albumose, or we know not what—is there, in the individual. It is somewhere in the system. It may be weak, it may be strong. Or the resisting power of the individual's tissues may be weak, or may be strong, or the idiosyncrasy of the individual may be such as to render him well-nigh immune or particularly susceptible. The poison may be causing actual physical signs and symptoms, or it may be apparently latent but powerful for evil, and perhaps gaining strength wherewith to strike with Thug-like precision and force when long forgotten and least expected, and when inadvertently the unwary victim has laid himself open to attack by being run down through worry, overwork, or neglected ill-health.

It matters not whether the poison be the syphilitic or tuberculous; it may suddenly seize upon the lungs, larynx, nervous system, or connective tissues. Surely if the open-air treatment is called for at the beginning for the one it is equally so for the other to avert the staggering consequences of the original infection, and yet I have never seen it advocated equally for both.

In syphilis, mercury undoubtedly does good. Probably until the last thirty years it has, I think, done more harm

than good. It is not an antidote to the syphilitic poison any more than potassium iodide is. It probably helps the tissues of the syphilitic, much as I find that arsenic sometimes seems to help the tissues of the tuberculous. I do not feel that it is a "specific," and Diday, whose work on the subject seems to me to carry much weight and conviction, certainly seems to teach the same.

During ten years in a busy practice in the University town of Cambridge I saw many young men with early syphilis, and I often kept in touch with them for many years after they had gone down from the University. And one thing impressed me much; that whereas a poor, underfed scholar, if infected, was hit painfully hard, the well-to-do hunting or athletic undergraduate generally suffered lightly. The latter led an open-air life, he ate meat three times a day, his tissues were well nourished and therefore at a high resistance pitch. But the scholar, often poor, trying, because of the *res angusta domi*, to live on his scholarship, who generally had porridge for breakfast, bread and jam for lunch, and a poor dinner in hall, sometimes at a dreadful time of day, badly served and hastily eaten or left, he, I noticed, often suffered badly. And this, too, in spite of the fact that the sporting undergraduate was often very casual about taking his mercury. He very often, however, got off cheap, had but slight secondaries, and heard no more of his trouble. For, later on, he continued to live a well-fed, open-air life, often as a country gentleman or in some other easy-going position in life.

I remember some ten years ago remarking on my observations to Sir George Humphry, before the "open-air treatment" had come to stay, and he said that throughout the enormous experience of 50 years' practice in Cambridge he had always noticed the same thing—that the well-fed sportsman, in spite of his being casual about his mercury, did not hear much of his trouble in the afterwards, and I remember his adding: "Ah! I used in the old days to salivate them to pints a day! but they wouldn't stand it, and they seemed to do very well without." He remarked, too, how heavily the poor student often suffered, although he was conscientious and regular in taking his mercury. Perhaps he was given too much, and became miserably ill with his throat, and rash, and aches, and fever, and early skin affections, and horrible melancholia. I can think of four such now. One has spastic paraplegia, and is living; another is dead of general paralysis of the insane; the third has locomotor ataxy; and the fourth is insane, also with ataxia, and I hope by this time dead. Three out of the four became Fellows of their college.

If the athlete chronically poisons himself with alcohol, and leads a dissolute life (I mean when syphilitic) he goes to grief—but later on. I have seen six such cases within the last three years—magnificently developed men, and with grand records as athletes. One died of phthisis, the second of appendicitis (tuberculous), the third of cerebral haemorrhage, the fourth of arterio-capillary sclerosis and kidneys, the fifth is just alive, and has phthisis, the sixth died of phthisis, and chronic Bright's disease. They had all drunk hard, and had led unhealthy town-loafing and dissolute lives. All the five died here in Davos, at or near forty years of age.

During the five years' observation of patients in these high Alpine altitudes I have come to the conclusion that 30 per cent. of the men patients here who have phthisis are syphilitics—and perhaps more. They are, as a rule, men of the upper middle class, who have led hard-working business lives. They are a type of case that clinically one can recognize, and their want of healthy carmine colour, and their thin hair or baldness, lead one to suspect them. It is wonderful how this class of case improves here, if not too far gone. Mercury gently given certainly does them good. I notice that they are specially liable to ischio-rectal abscess and fistula in ano, and to ear trouble and deafness, more so than other phthisical patients. They are generally between 30 and 40 years of age, and though they yield quickly to treatment and improve much, they seldom are quite cured. If only they had undergone a long open-air cure directly the character of their syphilitic infection was recognized, I believe they would not have had to come here for the open-air cure of their phthisis.

I have asked many directors and assistants of sanatoria and hospitals on the Continent, and they have put the proportion of the syphilitics among the phthisical men as 30 and 40 per cent., and twice lately I have been told 50 per cent.

Dr. Klause, Assistant to Professor Koch, and chief of the phthisical wards at the Charité at Berlin, told me recently that fully 50 per cent. of the men were syphilitic. He also

told me that when in charge of the venereal diseases department he noticed that more than 50 per cent. of the patients showed physical signs of lung disease.

The German mutual benefit and insurance societies find it pay to establish open-air sanatoria for their phthisical members. I think they do would do well to do the same for their early syphilitic cases.

But the trouble is that the man who finds he has contracted syphilis is only too anxious to conceal the fact that there is anything the matter with him. He is depressed, he loses his spirits and mopes indoors, loses his appetite, pins his faith on the mercury, takes fully much of it, and then when the ill-feeling of the secondaries comes he goes from bad to worse, and is for months in the worst possible condition for resisting the invading poison at the most critical time. He is sent, it may be, to Aix-la-Chapelle or Wiesbaden, where he leads an unhealthy hotel life. Far better, if he were sent at once to an open-air sanatorium, to lead the same life as is laid down for a patient with slight tuberculosis. Or better still, if he were sent to a high, dry, bracing climate, such as the African veld or the high Alpine plains of Central Europe, where he can amuse himself gently out of doors for six months or a year, under supervision, and then take to sport to keep him happy and healthy, amongst numbers of other people all busy in the pursuit of health or pleasure. For I notice that early syphilitics do extraordinarily well in these Alpine heights. Blood changes here are rapid; metabolism throughout is heightened, and the patients rapidly regain health, their throat affection and rash disappear very quickly, and their pains and fever rapidly go, when they have acquired the appetite which the dry, cold air seems to force on them. And I find that very little mercury goes a long way.

He should devote certainly one year to an open-air life, and, if he can afford it, two years. I believe that then we should not have the 30 per cent. of men syphilitic phthisical patients, and the million of lives per annum which tuberculosis at present costs Europe would also be very much reduced.

Of course, with the labouring classes, it is probably useless to dream of their getting a year or two. But they might get, as they do for tuberculosis, three or four months, though very few of them would take it if they could get it, I feel sure. But how about compulsion? We use compulsion in case of small-pox, why not for great-pox?

This leads me to the question whether our national and international associations and leagues against tuberculosis should not, in considering the prevention of tuberculosis, attack this great source of it, namely, syphilis. And should they not advocate the open-air treatment of syphilis, and should they not agitate ceaselessly for rational legislation on the point? I see great authorities speaking sanguinely of "stamping out this scourge (tuberculosis) of the human race." I believe there is no hope of stamping out "this scourge" without also taking means to stamp out the other even greater scourge—syphilis. We should consider the soil not the seed. The tubercle bacillus will always be amongst the flora of damp, dark countries, and while syphilis is plentiful, ever providing a suitable soil, tuberculosis also will flourish.

I do not believe that our National Association against Tuberculosis will ever start a crusade against syphilis unless the King, or some other strong, sensible man, or some independent members of committee were to take a strong line on the subject.

Many, I know, will say that my estimate of syphilitics among phthisical men is too high. I feel confident that when they have made as full inquiries and observations as I have made, they will not be of that opinion. I refrain from offering the usual meretricious attempt at proof by plastic statistics. The last five years have sickened me with their rich supply of lying half-truths.

I only hope that the open-air treatment for early syphilis may become more usual, and I only hope that the National Association against Tuberculosis may advocate it. It need not be known whether the patient has tuberculosis, or early syphilis, let the treatment be the same. By helping him to live down his syphilitic poison, we can prevent the chronic inflammatory processes which undoubtedly afterwards provide the soil for the tubercle bacillus. Surely this is not only a wise, but a very necessary policy. I firmly believe that half a million deaths a year in Europe would be prevented by this policy.

But I fear that by taking a strong line and striking at the root of much of the evil, the National Association would run the risk of alienating much valuable sympathy.

I do not remember having seen the open-air treatment of syphilis advocated in our journals. And yet it has long been clear to me that it is absolutely as loudly called for as the open-air treatment of tuberculosis.

When a patient who comes to us is proved to have early tuberculosis we say to him, "This is serious. If you can afford it, you must give up your work, and go away for six months and be overfed and live in the open air in the best possible climate. After that, if you can afford it, you had better live for another year or two in the open air." I contend that we should do well if we did exactly the same with an early case of syphilis.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

RUPTURE OF THE RIGHT AURICLE.

DEATH from rupture of the right auricle is so rare that the following notes of a case may be of interest.

Joseph M., a well-nourished muscular negro, aged about 45, left his home at 6 a.m. on October 4th, 1902, and went to work. By 3.30 p.m. his work was completed, and he was returning home, when he met his son, and the two went into a Chinaman's shop to have a drink. The deceased drank absinthe mixed with water, picked up a couple of sucking pigs which he was taking home, joined his mate, who was waiting outside, and went on. He had not gone much more than 200 yards when he fell on his face, and when he was picked up he was found to be dead. The body was brought to the hospital that evening, and on the morning of the 5th Dr. de Gundry, Assistant Medical Officer, and I, did a partial necropsy.

The chest was opened, and at once the pericardium was seen to be distended with what appeared to be a somewhat excessive amount of fluid; when the sac was opened, however, and the fluid allowed to escape, it was seen that this was serum covering a dark clot, which entirely enveloped and concealed the heart. The contents of the thorax were carefully removed, and the lungs, which were healthy, were separated from the heart, the vessels being divided as far as possible from the latter organ.

The walls of the aorta were thickened, and the calibre of the vessel was widened for an appreciable distance, giving the impression that a fusiform dilatation existed in its first part. The valves, like all the other valves, were to all appearance healthy.

The heart itself was enlarged in all directions, both ventricles being about equally above the average size, and the heart, though a large one, was almost equally enlarged. The right auricle, however, was, or had been, out of proportion, and was rent right across from one side to the other, and at right angles to the direction of the muscular fibres. The edges of the tear were ragged and thin, and the wall at this part showed an almost complete absence of muscular fibres.

Judging from *post-mortem* appearances, there is no doubt that there existed during life an aneurysm of the right auricle, and, from what was left of the walls, it was evident that the aneurysm was not a small one—in fact, the auricle appears to have become a mere sac of thickened pericardium attached to the rest of the heart by a few elongated and starved muscular fibres.

I learnt later from the relations of the deceased that on September 20th, a few days only before his death, he had begun to complain of a pain in the middle of his back, and that he had been to see a doctor, who had given him a bottle of medicine, which he is said to have taken regularly. Apart from this pain, which was more annoying than severe, he did not suffer much, as death must have been very sudden. He fell literally on his face, not even letting fall the pigs which he carried tucked one under each arm. Nor did he make any attempt to break his fall with his hands. There were no lumps or stones on the road where he fell, yet his face struck the ground with sufficient force to graze his right cheek, and to drive his teeth through his lower lip. The presumption is that the man was dead before his head reached the ground, and from the size of the rent in the auricle this is not unlikely.

Between 6 a.m. and the time of his death deceased had walked twelve miles or more, always carrying something. For the last few hours he carried two pigs, each weighing about

10 or 12 lb.—a respectable load even for a healthy man, when the fidgety character of his burden is taken into consideration.

Seychelles.

ROBERT DENMAN, M.R.C.S.Eng., L.S.A.,
Chief Medical Officer.

CASE OF INTERNAL STRANGULATION THROUGH A HOLE IN THE MESENTERY.

THE patient, a boy aged 14, was seized with pains in his abdomen about 12.30 a.m. on September 29th, 1902, and about 1 o'clock he vomited and passed a small motion. The pain became worse, and I was sent for about 6 a.m. I found him somewhat blanched and lying on his back, with a pulse-rate of 110 and a temperature of 99° F. There was no distension of the abdomen and no dullness on percussion, but there was pain on deep palpation over the right iliac fossa. The vomit was not faecal.

I ordered the boy to be kept in bed, and that nothing should be given except a sip of water. I saw him again about 11 a.m., when the symptoms were pretty much as they were before, but the boy felt easier and had slept a little.

At 3 p.m. there was some distension of the abdomen, most marked to the right of the middle line and towards the right iliac fossa. I then told the parents an operation was necessary, but they would not give consent that night. Next morning there was marked tympanites and greater resistance to the right of the middle line.

The pulse was 144, and the lad more blanched. I obtained consent for an operation, and had the patient removed to the Oldham Infirmary, with a provisional diagnosis of perforative appendicitis.

He was operated upon later on in the day, and by the kind permission of Dr. Martland, who operated, I am able to give the following particulars:

After chloroform was given, an incision about 3 in. in length was made in the right iliac region. As soon as the peritoneum was cut through a large amount of deeply blood-stained serum escaped, suggesting internal haemorrhage, and the coils of small intestine which presented had the appearance of being filled with blood. The appendix was found perfectly normal, as was the lower end of the caecum.

The incision was extended upwards as the coils of distended bowel were traced both ways, and after some difficulty the two portions of bowel were found to pass through a narrow opening in the mesentery and were very tightly constricted. This opening was situated at the base of its attachment where it crosses the second lumbar vertebra. The bowel on the distal side of the constricted loop was normal and empty.

After great difficulty a director was passed through the constricting ring, which was then enlarged and the bowel pulled back into its normal position, the opening being closed by a suture. The opening had a firm, rounded edge, and appeared to be a natural one. After the abdominal wound was closed the boy was put to bed. The pulse was weak and running and the temperature 97.8° F. Transfusion was done, but the boy died about 12 o'clock the same night.

At the necropsy there was very little sign of peritonitis. The abdomen contained some blood-stained serum. The bowel was still somewhat distended, deeply injected, and showed the marks of constriction. The length of strangulated bowel was a little over 3 ft., and was ileum. The opening in the mesentery was found sutured up, and seemed in every way to have been a natural opening. Everything else was normal.

The only suggested exciting cause was that the boy had been trying to ride a bicycle two days before, but he had not complained of hurting himself.

Stratford.

A. ANDERSON, M.B., M.R.C.S.

CASE OF ECLAMPSIA FATAL AFTER DELIVERY.

At 6.45 a.m. on December 25th, 1902, I was called to Mrs. E., three miles from my residence. She was 25 years of age, and had had one child previously three years ago, when the labour was a natural one, with the exception of an adherent placenta. She appeared a strong, healthy woman, and was quite well the evening before, which she spent at her mother's house in the same village. I arrived at 7.30 a.m., and found a midwife had been called in an hour earlier. The patient was unconscious, and the midwife informed me that she had had three fits during the last hour. The child's head being already in the vagina, there was no time to administer an anaesthetic, and with the third pain a living healthy child at full time was born, and the placenta immediately expelled.