aortic area (the second right costal cartilage), and the superficial character of the heart-sounds over this dull area.

2. The dullness on percussion, absence of respiration, vocal resonance and fremitus over the lower two-thirds of the left chest.

3. The great displacement of the heart.

4. The much greater frequency of aneurism than of solid growth.

5. The constant pain of a boring character at one localised spot.

The pressure-signs, viz., the difference in the strength of the radials, the difference in the size of the pupils, the character of the cough and of the voice, and the dysphagia, were equally in favour of aneurism or of tumour. The absence of murmur (I am now speaking of the case as first seen) was rather in favour of aneurism than of tumour, many of the best authorities stating that, in aneurisms of the thoracic aorta, uncomplicated by cardiac valvular lesion, murmur is more frequently absent than present. Stokes, speaking of the differential diagnosis of intrathoracic cancer and of aneurism, says: "If we suppose a case in which the evidence on both sides were equally balanced, the existence of a soft single systolic bellows murmur should incline our opinion towards cancer. Bellows murmur in aneurisms of the arch is a more rare circumstance than has been supposed." The character of the murmur, when it did appear, was in favour of a solid growth. The murmur was single, systolic, of long duration, and *not followed by the second sound*.

Taking all the physical signs into consideration, the balance of evidence, when first seen, was to my mind in favour of solid tumour complicated with copious effusion into the left pleural cavity. The subsequent progress of the case, the increased oedema at the root of the neck, the gradual progressive displacement of the heart, the appearance of the infraclavicular systolic murmur, the obliteration of the right radial pulse, the appearance of a friction-sound over the lower half of the chest, the glandular enlargement at the root of the neck, and the feeling of a solid body by the probe when the thorax was punctured, showed conclusively the presence of a solid tumour within the thorax.

The Nature of the Tumour.—To the naked eye, it exactly resembled encephaloid cancer. On microscopic examination, it was found to be a lympho-sarcoma. The greater part of the tumour evidently consisted of enlarged bronchial glands. The nodule over the aorta corresponded in position to the remains of the thymus gland, an organ which is frequently the seat of these growths. The large size of the tumour is noteworthy. Its position in the thorax and its relation to the various structures fully explain the symptoms and physical signs seen during life. It is somewhat remarkable that, when at rest, there was little or no increase in the frequency of the respirations. The slightest exertion, however, made the patient very short of breath. The condition of the suprarenal capsule was a remarkable feature of the case, and tends to show the close physiological relation which these organs have to the lymphatic glandular system. The absence of pigmentation of the skin proves that all forms of disease of the capsules are not necessarily attended by bronzing. The case mentioned by Sir William Jenner at a meeting of the Pathological Society of London, in which there was pigmentation, the capsules being healthy, but the solar plexus injured by a mass of enlarged glands, confirms the opinion of Quekett, that the discoloration of the skin depends upon modifications in the solar plexus, and that the frequent occurrence of disease of the capsules with bronzing is accounted for by modifications induced in the solar plexus through the numerous filaments which supply these organs.

The early history of the case favours the idea that the disease originated in the thorax, and suggests the supposition that the enlargement of the bronchial glands was due to irritation, the result of inhalation of gunpowder-smoke.

A CASE OF LITHOTRITY WHERE NITRIC ACID INJECTIONS WERE EMPLOYED.*

By REGINALD HARRISON, F.R.C.S.,
Surgeon to the Liverpool Royal Infirmary.

THE solvent action of nitric acid upon the *débris* of a phosphatic calculus was well illustrated in the following case, which in many respects is similar to one recorded by the late Mr. Southam of Manchester, and alluded to by Dr. W. Roberts in his *Observations on the Solvent Treatment of Phosphatic Calculi*. (*On Urinary and Renal Diseases*, second edition.)

William C., a police officer, aged 45, was admitted into the Liverpool Royal Infirmary, under my care, on March 9th, 1875. The

patient had recently been under the observation of my friend Dr. J. S. Clarke, who, having diagnosed the existence of a stone in the bladder, advised his admission into the Infirmary.

Upon examination, I found a single stone, rounded and having a diameter of two inches and a quarter. The urine was alkaline, and contained pus. Though the stone was large, I deemed the case not unfavourable for lithotripsy. The patient required some preparatory treatment, and I was not able to commence lithotripsy till April 5th. I repeated the crushings during April and May twelve times.

The patient never experienced any unfavourable symptom, and a very considerable quantity of broken-up stone was passed. As in Mr. Southam's case, to which I have alluded, it appeared to me that fresh phosphatic depositions were taking place almost as fast as the others were removed. I resolved, therefore, to use nitric acid injections.

On May 27th (two days after a crushing), I had the urine of twenty-four hours' collection. This was analysed by Dr. J. Campbell Brown, who gave me the following report. The quantity of urine submitted to analysis was sixty ounces; this was found to contain 74.029 grains of phosphoric acid as alkaline earthy phosphates; 250.516 grains of phosphoric acid as alkaline phosphates; in all, 324.545 grains of phosphoric acid passed in twenty-four hours. On the termination of this twenty-four hours, I injected into the bladder half a pint of tepid water with two drachms of diluted nitric acid.

All the urine passed during the subsequent twenty-four hours was kept and analysed by Dr. Brown, with the following result. The quantity of urine submitted to analysis was seventy-eight ounces; this was found to contain 96.237 grains of phosphoric acid as alkaline earthy phosphates; 461.94 grains of phosphoric acid as alkaline phosphates; total, 558.177 grains of phosphoric acid passed in twenty-four hours.

Thus it appears that not only was a larger quantity of phosphate of lime and magnesia dissolved in the urine after treatment with nitric acid, but there was a still greater increase in the quantity of phosphoric acid passed in the form of alkaline phosphates. It is to be noticed that the quantity of urine on the day after treatment was greater than on the day before; and that, if, instead of estimating the total phosphates, we estimate the percentage of phosphates in the urine, we find that the percentage of alkaline earthy phosphates was very nearly the same after as before treatment, namely, increased from 0.272 to 0.282, and that the percentage of alkaline phosphates was increased from 0.95 to 1.35. But the absolute increase of phosphates is much more marked.

On nine subsequent occasions, the lithotrite was employed, and, on every second or third day afterwards, the bladder was injected as before with nitric acid in tepid water. Further observations, though made in a rougher manner, showed the increase of the alkaline phosphates after each injection; it was also noticed that the fragments passed were much more finely triturated than previously.

Under this treatment, the patient made a good recovery and left the infirmary quite well on June 21st. The total quantity of broken-up stone collected weighed four drachms. The use of the acid appeared to me at once to stop any further deposition of phosphates, and to facilitate the removal of the pieces as they were broken up by the lithotrite.

Dr. Roberts concluded his observations on Mr. Southam's case with the remark (*op. cit.*, p. 313): "This method is evidently capable of wider application than is now made of it by surgeons."

CASE OF SUICIDE BY HYDROCYANIC ACID.

By JOHN W. TRIPE, M.D.,
Medical Officer of Health and Analyst for the Hackney District.

THE following case of suicide by hydrocyanic acid having been under observation almost from the moment of the poison being taken until death occurred, and some minutes having elapsed before any symptoms were observed, as well as some acts of volition having been performed during that period, I consider it to be of sufficient importance to justify me in bringing it under notice.

In the early part of July, I was called at about 9.15 P.M. to see D. A., who was said to be dying from poison. On my arrival at his house, which was nearly opposite to mine, I found him sitting in a chair supported by two persons, gasping for breath, with his mouth wide open, eyes prominent and glistening, and his pupils slightly dilated and insensible to light. The skin was clammy, the fingers contracted, the muscles of the arms relaxed, the pulse scarcely perceptible, and the lips as well as the tongue purplish. There was a strong smell of prussic acid in his immediate vicinity, and his breath

* Read at Southport before the Lancashire and Cheshire Branch.

smelt slightly of it. His clothes were damp in several places from some of the acid having been spilt on them, and there was a very small quantity of vomit on his beard and clothes. Some mustard and water had been given to him, part of which, I was informed, he had swallowed. As there was not any ammonia in the house, I ran out for some, and, on my return in about two minutes, found that the heart's action had ceased, whilst the breathing was irregular and gasping, and continued so for about two minutes, when he ceased to live. I applied the ammonia to the nostrils, and poured a little mixed with water into his mouth, but it was not swallowed. He lived altogether, as nearly as I can judge, about eight or nine minutes from the time of taking the poison.

Directly after death, I searched his clothes, and found in his breast coat-pocket an ounce-bottle labelled "Acid Hydrocyanic (Scheele's)", quite empty, stoppered, pressed down to the bottom of the pocket, evidently with the intention of preventing it from falling out, and covered with a pocket-handkerchief, also firmly pressed down. The limbs were relaxed for some time after death; indeed, I was unable to ascertain when rigor mortis first set in.

At the inquest, the following evidence was given. He had been drinking largely of brandy for some days, so as to become very irritable and excited. About 9 P.M., he was so violent that his wife and daughter went to the front gate to seek for protection, as there was no other male person in the house besides D. A. He followed them to the front door of the house, which is about five yards from the gate, and remained there some minutes; then walked down the steps, five in number, passed by them into the street, and walked steadily for a distance which I subsequently measured and found to be just over thirty yards. They watched him whilst he walked this distance, and are quite sure that he never raised his hands to his mouth; indeed, on the contrary, he kept them down during the whole time. Having got as far as opposite to the middle gate of a house two doors off (they are double-fronted houses, with side-gates), he suddenly fell on one knee, the trouser-leg of which was cut, and then on his face, without making any struggle or effort to save himself. Two gentlemen, who saw him fall, raised him up and carried him to the house, and were quite certain that he never struggled. His daughter also stated that, as he passed her, she noticed a very strong smell of prussic acid.

I made a *post mortem* examination two days afterwards. The body was pale and the countenance composed; indeed, it became so within a few minutes after he died. There was not any smell of acid in the room; but, immediately on opening the peritoneum, a strong smell of the acid was observed by myself and the gentleman assisting me; more so, indeed, than on opening the stomach. I removed the stomach from the body before opening it, and took it away for examination, when I found it considerably congested, many of the vessels being enlarged and full of blood. The heart was slightly fatty and relaxed, the lungs dark and emphysematous, and the liver soft and degenerated. A few drops of blood only escaped during the necropsy, as I did not open the large vessels.

As other engagements prevented me from analysing the contents of the stomach that day, I was obliged to defer it until the next, which was more than two and a half days after the taking of the poison. On filtering a little of the fluid contents of the stomach, I could not detect the acid either by smell or by chemical tests; but, on distilling the remainder, I obtained a quantity equal to about two minims of Scheele's acid. The stomach contained only about two ounces of a thick fluid and a few pieces of candied fruit, and did not smell of brandy or any other spirit.

THERAPEUTIC MEMORANDA.

TREATMENT OF CHRONIC DIARRHŒA.

I AM prompted by a note on "Remedies for Chronic Diarrhœa", by Mr. Miall of Bradford, which appeared in the *JOURNAL* for December 30th, to state my experience of the value of the liquor bismuthi et ammoniæ citratis in the treatment of chronic looseness of the bowels. It is the best remedy with which I am acquainted for the condition in question. I first learned its use, several years ago, from a very able therapist—the late Dr. Alexander Fleming. When I was his house-physician, I saw him prescribe the medicine with excellent results in cases of chronic dysenteric diarrhœa. The dose I have been accustomed to give is one drachm of the pharmacopœial solution of bismuth thrice daily. Since reading a paper on the Treatment of Chronic Diarrhœa by Lime-water, published some time ago in the *Practitioner*, and written by Professor Cleland of Galway, I have usually ordered a draught containing one drachm of the liquor bismuthi in one ounce of

aqua calcis. A few months ago, I saw, with a medical friend, a little girl who had long been treated unsuccessfully for chronic dysenteric diarrhœa. We prescribed the solution of bismuth and lime-water, and the patient was soon quite well.

JAMES SAWYER, M.D.Lond., M.R.C.P.; Physician to the Queen's Hospital, Birmingham.

THE TREATMENT OF SUFFOCATIVE GOITRE.

As long ago as 1860, I well remember, when a pupil of Mr. John Tyler Featherstone, assisting that gentleman to insert a seton composed of six cords of silk into a large goitre which was compressing both in the mesial line and bilaterally the larynx of a boy aged 10. The seton remained in, as far as I remember, about eight weeks, being from time to time moved about so as to induce inflammatory action and to give outlet to the resulting pus. The case was entirely successful, and I saw the patient only a few years ago—a perfectly healthy man, with no affection whatever of the breathing or vocal functions.

Subsequently, while practising in Derbyshire, I have met with a great number of cases of bronchocele; but only a very small proportion of them could be described as of the suffocative type. In one case, that of a young woman aged 18, I followed out the same plan of treatment which I had remembered as so successful, and with good results. After the seton had been in some ten days, suppuration began, and the tumour was gradually lessening in size; but the patient was suffering from heart and kidney affection, and, after taking cold, pneumonia ensued, ending in uræmic poisoning and death seven weeks after the commencement of the treatment.

In the slightest cases, when seen early, I have generally found that the iodide of potassium ointment rubbed into the swelling once or twice a day, with the administration internally of both the iodide and bromide, or, in cases of an anæmic nature by no means uncommon, of the iodide of iron with bromide of potassium, will, if the treatment be steadily persevered in, produce a complete cure.

I may just remark that I found these cases by no means confined to Derbyshire or to a limestone formation. I had several cases under my care from the neighbouring counties of Nottingham and Stafford.

J. HORNSEY CASSON, M.R.C.S.Eng., Acting Surgeon to the Western General Dispensary, etc.

CLINICAL MEMORANDA.

TEMPORARY INSANITY AFTER CHLOROFORM.

THE interesting report of a case of "profound intoxication following anæsthesia by ether" in the *JOURNAL* of December 30th, reminds me of, I believe, an unusual case, which occurred in my practice about eight years since, of temporary insanity following the inhalation of chloroform. A woman had undergone the operation of removal of a cancerous tumour under the full influence of chloroform. On recovering consciousness, she manifested an intense aversion to myself, who had operated, so that it was absolutely necessary for me to leave the application of sutures, bandage, etc., to the surgeons who had assisted me. Meanwhile she was constantly muttering to them her desire that they should "kill" me. This condition had entirely passed off by the time of my next visit on the following day, and she had no recollection of the circumstance. She had previously expressed her determination that no one but myself should perform the operation; so there was no dislike of me.

In the other case, the operation is stated to have been tedious, and the quantity inhaled necessarily large. Doubtless, as with alcohol, the first effect of ether is as a stimulant, and then larger doses act as a depressant, thus giving it a similarity of action to chloroform; and thus the question may be raised, how far ether is superior to chloroform in protracted operations. But the point to which I wish to call attention is the intoxicating effect of chloroform in my case. It may be more common than I am aware of, but I have never read of a similar case. I think it an excellent plan to administer a good dose of brandy and water before the inhalation of chloroform, thus giving a stimulus to the heart's action, and guarding it against the depressing effect of the anæsthesia. In a case of an old woman aged 87, whose finger I removed about three years since, it acted remarkably well, appearing to assist the anæsthetic action of the chloroform.

I hope this brief communication may elicit from other practitioners reports of any similar cases which have occurred in their practice, with practical observations and suggestions thereon. JOHN EWENS, Surgeon to the Hospital for Women and Children, Bristol.