

and occasionally they prove useful in sciatica ; in the advanced stages of phthisis, much suffering is frequently produced by stitches, soreness, and pains in the sides and chest ; in such cases, I always direct the part to be well stuped, and then rubbed with warm laudanum ; this will very often procure immediate relief, but if it does not, we must apply a few leeches, and favour the flow of blood by the application of a cupping glass, occasionally a very small venesection is necessary, and the application of a small blister to the painful part. Those who have not been engaged in practice, will perhaps expect directions to enable them to distinguish which of these modes of treatment is suited to any particular pain. The pain of *pleurodyne* they will say is to be treated in one way, and that of pleurisy in another : now in the advanced stages of phthisis, it so happens, that the pleuritic affection occupies so small a space in most cases, that it cannot *a priori* be detected by the usual means of percussion and auscultation, and consequently we must try the remedies I have mentioned, in succession ; indeed I have seen laudanum and anodyne plasters succeed, where others believed that severer applications would have been necessary. In *crick of the neck*, diligent friction with laudanum affords immediate relief.

(*To be continued.*)

ART. XIII.—*A Case of Diseased Heart, accompanied by Angina Pectoris, exemplifying the Effects of the Hydro-sulphuret of Ammonia.* By ANDREW NEWTON, Esq.

———, ætat. 34, applied for my advice in October, 1830 ; he was a middle sized man, well made, his countenance was sallow, and lips livid : he stated that his health had always been good until about eight years ago, when he became affected with palpitations, headach, throbbing in his ears, and before his eyes ; at this time, he had been in the habit of sitting up at night, to

a very late hour, and taking large quantities of very strong green tea. On his adopting regular hours, and giving up the use of tea, those symptoms in a great measure subsided, although they never completely disappeared. After the lapse of three years, whilst in a situation where he had a great deal to do, the palpitations became more troublesome, and were now accompanied by a sensation of pain, and oppression in the epigastrium; this usually lasted for two or three minutes. Neither the palpitations, nor those attacks of pain and oppression were so severe as to cause much annoyance, until two years more had passed over. At this time he was living as valet to an invalid, and being obliged to sleep in the same room with him, was frequently awakened by his master calling to him in a very loud voice; when thus suddenly roused from sleep, his heart palpitated violently, and a more or less severe attack of the painful sensation in the epigastrium came on; even in the day-time any unusual exertion or agitation was sufficient to produce these effects;* in addition, he now became affected with dizziness, and throbbing in his head, these symptoms yielded to the use of digitalis and copious venesection.

Seven months previous to my seeing him, he had an attack of pleuritis, during which the palpitations were very violent and distressing; the inflammation was subdued by the usual treatment, but since this time, the palpitations have been more violent, and the paroxysms of pain much increased in frequency and duration, coming on every morning immediately upon getting out of bed, and usually continuing for about five minutes;

* At a subsequent period, I had several opportunities of witnessing those attacks; on their approach he stood up and threw back his shoulders, his face was covered with perspiration, and expressive of great agony, neither the pulse nor the respirations were altered in character or frequency. He said that the pain, which was very intense, commenced at the epigastrium, whence it advanced upwards along the chest, and down the arms, till it reached the ends of his fingers, and then gradually subsided. These attacks were frequently terminated by eructation. He said that these paroxysms were much milder than those which he had at night.

they also frequently occurred during sleep, obliging him to start up and remain in the sitting posture until they had subsided. The slightest irregularity in diet, the use of any stimulant, running up stairs, or any mental agitation, brought on a paroxysm : whenever he was out of employment, all these symptoms were much more troublesome than at other periods.

I first saw him early in October ; at this time his countenance was sallow ; his lips livid ; there was no emaciation. On exposing his neck and chest, the entire of the anterior wall of the thorax was seen elevated by each stroke of the heart ; there was also a strong epigastric pulsation ; the carotid and subclavian arteries throbbed violently. On applying the stethoscope over the region of the heart, the head was elevated by each cardiac impulse. The pulsations were irregular and intermitting. A very loud *bruit de soufflet* was heard, resembling the sound produced by a spinning wheel whilst in rapid motion ; this sound accompanied both the auricular and the ventricular contractions, it was more marked at the left, than at the right side, but was distinctly audible over the entire chest ; the respiratory murmur was every where natural, but feeble, and marked by the *bruit*. On examining the carotid, by means of the stethoscope, a loud and very distinct *bruit* was heard, differing however in character from that which existed at the heart, it was accompanied by a strong impulse ; this phenomenon was observable, not only in the carotid and large arteries, but even in their minute ramifications, thus it was very apparent even down to the ends of the fingers. His pulse was full, hard, and intermitting, 88 in the minute. On comparing the pulse at the wrist, with the pulsations at the heart, the interval between them was much more marked than in health ; the frequency of the pulse was not altered by change of posture ; his appetite was bad ; his bowels confined, and he was much troubled by flatulence.

I now gave him some aperient medicine which relieved him, and on the 12th of October, saw him along with Dr. Marsh, who suggested the propriety of trying the effects of the hydro-sulphu-

ret of ammonia. I accordingly ordered him to take ten drops twice a day in a tumbler of water ; this was increased gradually until it amounted to 35 drops twice in the day. Under this treatment, the action of the heart, in the course of ten days became much diminished, the pulse fell to 48, and became much less full, hard and intermitting, the paroxysms of pain and suffocation now only returned twice in the twenty-four hours ; the *bruit* in the arteries was much less apparent ; his general health also improved ; his appetite returned, and his bowels became more regular ; the secretion of urine was considerably augmented. When he had been taking the medicine for a fortnight, he complained of nausea and headach after each dose. It was now omitted for three days, and then resumed in doses of ten drops three times a day ; he continued to take it in this manner for two months, during which time the attacks occurred but rarely, and never except when he was agitated, or obliged to exert himself more than usual ; when they did appear, their duration and severity were much diminished. The medicine was omitted, and he remained in tolerable health during the ensuing three months. He now became less attentive to his diet, and the paroxysms returned ; the use of the medicine was resumed with equal beneficial effects, as when first administered. During the next two months, he was nearly free from any return of the paroxysms.

I now lost sight of him until July last, when he sent for me to attend him during an attack of cholera, from which he recovered in a few hours ; he stated to me that he was earning a precarious subsistence as a supernumerary waiter at different hotels, and that the paroxysms had become more frequent and severe.—I saw him again on the 8th of February, when I found him considerably altered for the worse, he was labouring under an acute attack of bronchitis ; his respirations were hurried, his pulse 96, strong, full, and intermitting ; the paroxysms were frequent and very severe ; the action of the heart was very violent ; his lips livid, and lower extremities anasarcous ; urine scanty.

He stated that since I last saw him he had endeavoured as long as possible to bear up against the disease, but at last was obliged to apply for admission at Sir Patrick Dunn's Hospital. Whilst there, he derived considerable relief from the treatment adopted; this consisted principally in the use of digitalis, frequent bleedings, the insertion of an issue over the heart, with the use of various diuretics to remove the anasarca. Immediately after his discharge, he caught cold. By means of a small bleeding, the application of a blister, and the internal administration of calomel, digitalis, and squill, the bronchitis was completely subdued. Various combinations of ammonia, æther, assafoetida, and opium, with different aromatics, were tried as antispasmodics, in the hope of relieving the paroxysms, which were very severe, frequent, and prolonged. The use of those remedies being productive of but slight benefit, I determined again to resort to the use of the hydrosulphuret of ammonia. I was deterred from ordering this earlier, by his stating that it had been used at Sir Patrick Dunn's, and had produced such nausea, that it could not be persevered in; thinking that this might have arisen from its not having been sufficiently diluted, I desired him to take three drops three times a day in a tumbler of water; finding that this agreed with him, he increased the dose to ten drops. On the fourth day from that on which he commenced the use of this medicine, I found him to all appearance much improved; he had passed a tranquil night; the paroxysm was less severe than it had been for many nights past; the action of the heart was less violent; the flow of urine increased, and the swelling of his legs so much diminished as to allow him to get on his boots. He wished to go out to transact some business, this, however, I forbade; he continued thus well during the entire day, ate his supper, and went to bed; about two o'clock at night he had a very severe paroxysm, which lasted for ten minutes, and terminated in death.

DISSECTION; eight hours after death.—Some emaciation, the anasarca of the lower extremities had nearly disappeared.

On opening the skull, a considerable quantity of transparent colourless serum was found at the base of the brain, and in the ventricles, the brain and its membranes were healthy.

Chest.—About a pint of straw coloured fluid was found in each pleura, and about four ounces in the pericardium, the left lung was united to the ribs by some old bands of adhesion, both lungs were edematous, but did not present any other lesion. On opening the pericardium, the heart was found enormously increased in size, this enlargement was principally at the left ventricle, the parietes of which were very much thickened, the cavity was not much larger than natural, the right ventricle was dilated, and its parietes slightly hypertrophied, the auricles were healthy, no valvular disease could be detected either in the heart or arteries, there was a very slight atheromatous deposit in the aorta immediately beyond the semilunar valves. The arteries of the neck, chest, and abdomen, presented no lesion of structure.

There was some serous effusion in the peritoneum, the abdominal viscera were healthy.

The heart has been deposited in the Museum of the Royal College of Surgeons.

REMARKS.—In this case the headaches,* palpitations, and violent and irregular action of the heart and arteries, made it at least probable, that the patient laboured under organic disease of the heart; auscultation and percussion put this beyond a doubt. It is true, we may have violent cardiac action, bruit de soufflet, and even angina, without organic disease, but in no case will we have violent cardiac action, combined with *constant* bruit, unless there be some organic lesion.—It is difficult to account for the *bruit* in this and similar cases; no doubt it is a frequent,

* The headaches, I should imagine, evidently depended upon the state of the heart; indeed these two states are so frequently connected, that whenever I am consulted about pain in the head, I seldom omit making an examination of the state of the heart; this is the more necessary, as in very many instances of heart disease, pain or uneasiness in the head is the only symptom complained of.

almost a constant* attendant upon valvular disease, yet it is not unfrequently found in cases where the valves are perfectly healthy, and in which no organic disease of the heart or arteries can be detected, either during life or on the most minute investigation after death. From the examination of a considerable number of cases during life, compared with the appearances observed on dissection, I have come to the conclusion, that a "*bruit*" when permanent and combined with other anormal cardiac symptoms, is invariably pathognomonic of organic disease.

I shall not enter into the question, as to whether this remarkable phenomenon be attributable to spasm, as was supposed by Laennec, or be purely mechanical, as asserted by Dr. Corrigan; further researches are requisite to enable us to determine whether either of those suppositions be correct.

This is one out of a multitude of instances, which might be adduced to exemplify the influence exerted by the nervous system upon organic disease. Here it is doubtful, whether or not the high state of nervous excitement gave rise to the organic lesions, but it is certain, that it was during this state that the symptoms first manifested themselves, and that every subsequent excitement or depression increased the violence of the symptoms, and gave new impulse to the disease; hence, we must carefully avoid every thing calculated to disturb the nervous system; and, whilst endeavouring to lower the circulation, we must allay all nervous irritation. If our attention be merely directed to the former, our object will be defeated, hence, the injurious effects of Valsalva's mode of treatment; by this means, no doubt, the pulse is lowered, but the system is also debilitated, the relief afforded is only temporary, the nervous symptoms are much increased, and thus the sufferings of the patient are abridged rather than alleviated. A

* In case of valvular disease, whether in the heart or aorta, the bruit may disappear when the circulation has been much lowered, but even in this case it can be easily re-produced, by causing the patient to make any exertion, such as walking across the room, or running up stairs.

too rigid adherence to antiphlogistic treatment, will soon convert active into passive dilatation, and accelerate the occurrence of dropsy; venesection now merely diminishes the volume of blood for a short time, and thus affords temporary relief, but after each repetition the blood becomes more and more serous, and should bleeding be discontinued, sudden and fatal effusion will take place into the brain or thorax. On this account, it is advisable to have recourse to bleeding as seldom as possible, and whilst the use of stimulants is strictly forbidden, a moderate use of nutritive food should be allowed.

Whilst upon the subject of diet, it may be mentioned, that every thing calculated to produce flatulence must be strictly prohibited, as this is a most troublesome and constant complication in cardiac disease.

Many objections apply to the treatment by digitalis; it is always a dangerous and often an uncertain remedy, and even in these cases in which it succeeds best, it soon loses its efficacy; its tendency to disorder the stomach is often such as to forbid its employment, it was therefore a great desideratum in medicine, to devise some plan of treatment which would lower the circulating system without producing permanent debility. Judging from the accounts which Cruickshanks and Rollo have given of the effects of hydrosulphuret of ammonia, it appeared to Dr. Marsh and me, that it might be advantageous in this case, particularly, as here, the angina seemed to depend upon organic disease of the heart; I tried it, and the event far surpassed our most sanguine expectations. Whilst the patient was upon meat diet and attending to his occupations, the action of the heart was lowered; the paroxysms of angina diminished in frequency, severity, and duration, and for a time were completely suspended; his general health also improved, and I may remark here, that his appetite instead of being destroyed, as is stated by Cruickshanks and Rollo to be the effect of this remedy, was, on the contrary, increased. With regard to the nausea which it produced when given in Sir Patrick Dunn's Hospital, I cannot help supposing, that this was attributable either to its not

having been sufficiently diluted, to its having been exhibited in too large doses, or to some error in its preparation; any of those causes will produce this effect.

Whilst upon this subject, I may mention, that this medicine has been repeatedly tried, both by Dr. Marsh and myself in various diseases, principally cardiac and cutaneous, in all it produced a powerful effect in lowering the pulse, the appetite was increased, and also the secretion of urine; in some cases where it was not sufficiently diluted, it produced nausea, head-ach and giddiness, these disappeared on omitting its use for a short time, and then giving it in a less concentrated form.

From the trials which have been made of this medicine in cutaneous diseases, there is reason to hope, that it may be found to possess some value in the treatment of this class of complaints.

In consequence of the tendency which the hydrosulphuret of ammonia has to undergo decomposition, it should always be recently prepared and kept in a dark place; when used, it should be given by drops, in preference to prescribing a draught or mixture.

ART. XIV.—*Contributions to Pathological Anatomy*. By RICHARD TOWNSEND, M. D., M. R. I. A., Fellow and Censor of the King and Queen's College of Physicians, Senior Medical Inspector of the House of Industry, Lecturer on Pathological Anatomy, &c.

CASE I.—*Sudden death. Spontaneous rupture of the heart.*

The body of a very old woman was brought into the dead room of the Whitworth Hospital, for anatomical examination, on the 30th of August, 1830. The external appearance of the body did not in any respect indicate previous disease; on removing the sternum, the pericardium appeared unusually prominent, and of a bluish white colour. When opened, it was found to contain more than half a pint of dark clotted blood,