Mackenzie recommends one grain of valerianate of zinc with two grains of the compound assafoetida pill, to be taken two or three times a day. Tincture of opium in five to ten minim doses, either alone or in combination with the same quantity of the tincture of belladonna, has been highly praised. I frequently order a mixture containing from ten to twenty grains of the bromide of potassium and three minims of Fowler's solution. The bromide allays the nervous erethism met with in hay fever, while the arsenic has a tonic effect. Antipyrin, in doses of from ten to thirty grains twice a day, has recently been found very efficacious. It appears to have an anæsthetic action on the sensory and secreting nerves of the nasal fossæ. As regards the second point—the removal of the patient from the exciting cause,—this can be effected by sending him to the seaside, or, still better, for a voyage. If neither of these plans be practicable, means must be taken to exclude the pollen &c, by wearing goggles and having the nostrils plugged with carbolised wool when out of doors, or a silk gauze veil, doubled, may be worn over the face. But from my experience the measures detailed above are merely palliatives; they may render life in the summer months a little less miserable to the unfortunate sufferers from hay fever, but there is no pretence that they can effect a cure, so that with every returning June the same wearying round has to be gone through. The only plan which affords a hope of giving permanent relief is by directly treating the local condition which is the fundamental cause of hay fever. That there is in this disease a preternatural irritability of the Schneiderian membrane, which renders it liable to respond to the effect of influences that would be entirely innocuous if applied to a healthy tissue, is, I think, pretty generally admitted, and this is the explanation of how it comes to pass: that though thousands are exposed to sources of irritation, such as the pollen of certain grasses, only an exceedingly small number suffer any inconvenience. Sir Andrew Clark, in the lecture to which I have already referred, proposes to exhaust this irritability by the application of a powerful stimulant, and for this purpose he employs a mixture of one ounce of glycerine of carbolic acid, one drachm of hydrochlorate of quinine, and the one two-thousandth part of perchloride of mercury, made into a solution by the aid of heat. With this he swabs out the interior of the nose, and claims a fair measure of success for the plan. The method of treatment which has been more largely employed in America than in this country is, however, the one which commends itself to my judgment, as being at the same time based on scientific principles, and being also free from risk, and attended with but comparatively little pain. I allude to the employment of the galvano-cautery. The mucous membrane of the nose must first be rendered anæsthetic by the application of a 20 per cent. solution of the hydrochlorate of cocaine, and then the thickened tissue of the inferior or middle turbinated body, as the case may be, is to be freely and deeply scored with the galvano-caustic blade. In some cases I find it is better to use a fine point, as the deeper parts can be more thoroughly cauterised with this than with the blade. The smarting after the cauterisation may be diminished by introducing into the nostrils wool smeared with carbolised vaseline. Even a single application will sometimes effect a great change for the better, but usually several sittings are required before complete success is attained. As regards the use of a solution of cocaine applied to the nose, the expectations which were formed of its efficacy in hay fever when the drug was first introduced have not been realised. Though the immediate result of the application is to produce an alleviation of the more distressing symptoms of the disease, the effect soon passes off, and the application has to be renewed if relief is to be obtained. As a result of the dilatation of the blood-vessels, which is the secondary effect of cocaine, the mucous membrane increases in thickness, so that eventually the drug aggravates the evil it was meant to cure. Moreover, its seductive effect should not be forgotten, nor the risk of starting the cocaine habit ignored, so that I would join with Mr. Lennox Browne in deprecating the employment of cocaine in chronic diseases of the throat and nose.

Wimpole-street, W.

HALIFAX NEW INFIRMARY—The donations or promises of donations for this object now amount to over £38,950, including a sum of £5000 from Mrs. Williams, daughter of the late Mr. Joshua Appleyard, of Halifax.

A CASE OF ANEURYSM OF THE ASCENDING PART OF THE ARCH OF THE AORTA; RUPTURE INTO THE SUPERIOR VENA CAVA.

By RICHARD SISLEY, M.D. LOND.,
MEDICAL REGISTRAR AT ST. GEORGE'S HOSPITAL.

THE patient was thirty-five years of age. He had been a baker in the commissariat department of the army for some years, and lived for a time at Gibraltar, where he had "rock fever" in 1881. This was the only illness from which he had suffered, and there was no history of accident. It was not ascertained whether he had had syphilis, but he had a scar on the dorsum of his penis. This was the only evidence in favour of the hypothesis that he had had that bad disorder. The man married in 1882. His wife had had two healthy children, and no miscarriages. After leaving the army the patient worked as a baker till 1886, when he became a potman. He was, according to his wife's account, a sober man even during his year of public-house life. On Jubilee day he injured his hand, and was from that cause obliged again to change his occupation. In August, 1887, he "went on the parish," and had from that date worked as a labourer. One night in January, 1888, as he was about to go to bed, he suddenly reeled and fell down in a state of insensibility, but he immediately regained consciousness. He had no similar attack at any other time. During the winter of 1888-89 he had a cough, but did not complain of shortness of breath. His wife noticed that when he returned home from work his eyelids were puffy and his face rather swollen. This condition was only seen at night; by the morning the oedema had always disappeared. On March 14th the patient left home as usual, and it chanced that his work lay in front of St. George's Hospital. Not feeling well, he went in for advice; but he did not consider himself seriously ill, and wished to go home. His face and neck were deeply cyanosed, his eyelids puffy, and his ears almost black. His arms were slightly cyanosed. The other parts of his body were of natural colour. A double murmur was heard over the middle of his sternum. His mental state was clear, but he was drowsy. He complained of no pain, and had no paralysis.

Dr. Ewart diagnosed that the man had an aortic aneurysm, which pressed on his vena cava superior. The patient was bled to sixteen ounces. It was noticed that his cephalic and jugular veins pulsated, and that the man bled very freely. There was, indeed, a difficulty in stopping the hæmorrhage; an ordinary bandage did not suffice, and a splint was applied. The patient was not relieved by venesection. His face and arms became gradually more cyanosed, and he became more and more drowsy, and finally comatose. He died about two hours after his admission to the hospital.

At the necropsy it was found that the right side of his heart was healthy. The left ventricle was slightly hypertrophied. The aortic valves were not thickened. The aorta was atheromatous. There were no patches of calcification. In several places there were depressions measuring about a quarter of an inch in diameter. The depressed parts were puckered, and the aortic wall was thinner there than it was elsewhere. It was evident that the depressions were caused by cicatricial contraction following endoarteritis. Three-quarters of an inch above the posterior aortic valve there was a saccular aneurysm. The opening into the aorta was of rounded form, and an inch and a quarter in diameter. Beyond the opening the sac measured about an inch and a half in its transverse diameter and two inches from above downwards. The wall of the aneurysm was smooth, except where it was in contact with the walls of the vena cava and of the right auricle. The aneurysm extended between the walls of the aorta and the right ventricle as far downwards as the inter-ventricular septum, and upwards to a point three-quarters of an inch below the opening of the innominate artery. About the centre of the right posterior part of the aneurysm there was an opening into the vena cava immediately above the entrance of that vessel into the right auricle. The opening was of irregular form; its edges were ragged and thin, and they projected slightly into the vena cava. The aneurysmal sac

contained a small clot. It was not adherent to the walls of the sac, nor was it laminated. (See engravings.)

The explanation of the symptoms, as viewed by the light of the necropsy, is sufficiently obvious. The œdema of the face which followed a hard day's work was brought on by pressure of the aneurysm on the vena cava superior. The final catastrophe was caused by the rupture of the aneurysm into the vena cava. This produced pulsation in the veins of the head, neck, and arms, and the increasing congestion

From a drawing showing the rupture of the aneurysm into the superior vena cava. A, Superior vena cava. B, Rupture. C, Right auricle.

of the brain, which, in its turn, caused the coma from which the patient died.

Aortic aneurysms very rarely rupture into the vena cava superior. The reasons for this rarity are not far to seek, when the anatomical relations of those vessels are remembered. In order that this condition may obtain, two layers of pericardium have to be broken through, and it is also necessary that adhesions should have previously been

From a drawing of the aneurysm, showing the rupture from the aortic side. A, Innominate artery. B, Rupture. C, Aneurysm. D, Posterior aortic valve. E, Left ventricle.

established between the layer of pericardium covering the aorta and that covering the vena cava superior. Should the aneurysm burst before such adhesions are formed, the rupture is necessarily intra-pericardial.

The late Dr. Sibson made a careful analysis of nearly 900 cases of aortic aneurysm.¹ Of these cases, there were twenty-eight of rupture into the pericardium, and only

seven of rupture into the vena cava superior. Dr. Sibson gives only a brief analysis of the cases, and it is a matter for regret that his contemplated work on aneurysms of the aorta was never published. Of the seven cases quoted by Dr. Sibson, two are museum specimens, of which the account is very meagre. Of the first, he says there was pressure on the vena cava descendens, the heart was large, and the right ventricle was hypertrophied and dilated.² Of the second cases,³ the only information given is that there was pressure on the vena cava descendens. Concerning the cases, as distinguished from the museum specimens, rather more information is given. In Case 1, it is said there was pressure on the vena cava descendens, the heart was enlarged, the pericardium was adherent, cardiac murmur was said to be absent, and the patient had cough and dyspnoea. In Case 2, there was pressure on the vena cava descendens, a cardiac murmur was noticed, and the patient suffered from cough, dyspnoea, and pain in his neck and shoulders. In Case 57, Dr. Gibson merely mentions that there was a cardiac murmur and pressure on the trachea. In Case 63, the heart was large, a cardiac murmur was noticed, and the patient had cough, dyspnoea, and pain in his neck and shoulders. In Case 70, there was pressure on the vena cava descendens and on both lungs, there was erosion of the sternum, and the heart was stated to be healthy.

Among the Transactions of the Pathological Society of London I have found only one recorded case of an aneurysm of the aorta communicating with the superior vena cava, and this was a very interesting "card specimen" exhibited by Dr. Charlewood Turner,⁴ and of which he gave full notes. Some of the symptoms mentioned in this case are identical with those observed in the case I have recorded. The patient had evidence of obstruction to the venous circulation in the upper part of his body. There was much duskeness of the face, and a loud "to-and-fro" bruit was heard over his heart. There is no note in Dr. Turner's case of the venous pulsation which formed so striking a symptom in Dr. Ewart's case. The morbid anatomy of the two cases differs considerably; Dr. Turner's appears to have been one of dissecting aneurysm. I have to thank Dr. Ewart for his kindness in allowing me to publish the case, and my friend Mr. John Richmond for making the drawings from which the engravings are taken.

Park-row, Albert-gate.

THE AFTER-TREATMENT OF TRACHEOTOMY IN DIPHTHERIA.

By G. L. CHEATLE, M.R.C.S., L.S.A.,

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By the kind permission of Dr. Beale, not only am I allowed to publish these cases, but by his sanction was allowed during my appointment as house physician to adopt a treatment of them which has resulted in two cases recovering out of five operated on. Unfortunately, lately the mortality in these cases at King's College Hospital has been rather severe. The chief principle of this method of treatment is rest and the strict attention to its details. It will be convenient to describe it under the headings of (1) General and (2) Local.

General.—Under this heading I would include every detail in the prevention of exposure at the time of operation, warm blankets, hot-water bottles, warmed sponges, warmed tube, and immediate transference to a tented bed warmed (up to about 70°) and moistened by steam. Chloroform was administered in every case during the operation, and the tracheotomy done was the low one.

Local.—This is the part of the treatment I particularly wish to call attention to. It consists of the choice of tube, and the clearance of the tube and the trachea. The tube found most convenient was the ordinary lobster-tailed low tracheotomy tube, the inner or lobster-tailed portion of which slips in and out with the greatest ease and least disturbance to the patient. In keeping the tube and trachea clear, the insertion of feathers, as was generally the custom here, was totally abolished; primarily for this

Museum specimen 13.

³ Museum specimen 31.

¹ The Aorta and the Aneurysms of the Aorta, by Francis Sibson, M.D., F.R.S. 1858.

⁴ Vol. xxxvi., p. 148.