

action, is improved in appearance, and speedily restored to its normal condition. In four cases the remedy was employed, of these two got well and two died.

4. *Spiritus Vini*.—(Applied with a pencil to the fauces, and at the same time, in a poultice, to the neck.) The influence of the spirits of wine upon the diphtheritic deposit was not very striking. Of three children, in one family, treated with it, one died, and two got well.

5. *Sulphur Sublimatum*.—Dr. S. agrees with Dr. Hanner, that the accidental action exercised by the flowers of sulphur in cases of diphtheria, is dependent upon the slight development, which occurs in some samples of it, of sulphurous acid, causing it to act as a gentle caustic. The sublimed sulphur is drawn into the fauces, every three or four hours, by insufflation. Under its use, two slight cases got well, a third, more severe case, terminated fatally.

From his experience thus far, Dr. S. infers that a favourable termination may be expected in slight cases of diphtheria under the use of either of the above remedies, while, under them all, death will ensue in severe cases. Neither of them has the power to prevent the extension of the diphtheritic deposit beyond the fauces. The one most to be depended upon, from its unquestionable power as a solvent of the membraniform deposit, is the *aqua calcis*.

The treatment of diphtheria pursued by Dr. S. consists in the local application of lime-water, and, internally, the administration of chlorate of potassa, quinia, and wine. When laryngitis sets in, a resort to emetics, and when asphyxia is threatened, to tracheotomy.—*Centblt. f. d. Medicinisch. Wisschftn.*, No. 56, 1870. D. F. C.

18. *Experimental Contributions on Pulmonary Hemorrhage*, by Drs. L. PERL and H. LIPMANN, of Berlin.—It is asserted by Niemeyer, in his work on "Phthisis," that one of the causes which, by a direct irritant action on the lung-tissue, tend to produce phthisis, is the blood which remains after hæmoptysis, and which coagulates in the bronchi and lung-alveoli. He supposes that hæmoptysis may precede an attack of phthisis, and the blood acting as an irritant lead to pneumonia and consequent cheesy metamorphosis. This doctrine has already, before Niemeyer, been held and opposed by many, and the present authors have attempted a solution of it by experimental means. The results of a series of experiments on dogs and rabbits are given, in which blood was introduced directly from a vein in the neck into the trachea, it having been previously opened by a small incision. The first fact brought out by these experiments is that in hemorrhage into the bronchi, the blood is sucked into the finest bronchi and alveoli of the lung, so that, even twelve hours after a very extensive hemorrhage, no trace of blood-clot could be found in the larger bronchi. This agrees with an observation made by Traube, that in the lungs of persons who have had hæmoptysis during life, it is very rare for appreciable clots to be discovered, and that they are only found when death has ensued from suffocation during the hæmoptysis. These experiments further showed that blood passing into the sound lung does not of itself act as an irritant, does not produce inflammation, but is, on the contrary, gradually absorbed, without producing any noticeable change except a moderate emphysema. It is, in addition, possible that the blood pigment may produce pigmentation of the epithelium of the alveoli of the lung.—*Glasgow Med. Journ.*, May, 1871, from *Virchow's Archiv*, Dec. 1870.

19. *Mediastinal Tumours*.—Dr. FRANZ RIEGEL contributes (*Virchow's Archiv*, Band xlix., Heft 2) an elaborate paper on the diagnosis and pathology of tumours of the mediastinum, and details an interesting case which was observed in the hospital at Würzburg.

Of 42 cases collected by Riegel, in which the nature of the tumours was ascertained, 33 were cancerous or sarcomatous, 4 fibroid, and 5 dermoid cysts. Virchow is of opinion that many of these tumours take their origin in a persistent thymus gland; others probably spring from mediastinal or bronchial glands, from glands in the root of the lung, from arcolar tissue in the outer coat of the great vessels. Of carcinomatous tumours, medullary cancer is the most frequent.

Mediastinal tumours are met with oftener in the male than in the female sex. They occur most frequently in persons between 20 and 30 years. They may present no symptoms whatever for a long period, and when at length they appear the disease may make extremely rapid progress, and lead within a very short period to a fatal issue. In a case described by Jaccoud, the patient did not complain of anything till eight days before death took place. More commonly, however, the symptoms are developed gradually. Mediastinal tumours may grow upwards towards the neck, or forwards so as to destroy the sternum and ribs. In the majority of cases they grow inwards, compressing the lungs, the heart, the vessels and nerves towards the vertebral column. Very often a bulging will be observed in the thoracic wall corresponding to the tumour. When the tumour attains some magnitude, a want of symmetry in the sides of the chest becomes manifest. Pulsation is sometimes observed in the bulging part. The respiration is accelerated, its type varying with the size and situation of the tumour. Percussion establishes the presence of dulness and increased resistance when the tumour is situated near the thoracic wall. The vocal fremitus is usually diminished, but in the case of solid homogeneous tumours may be increased. Mensuration usually reveals the existence of a difference between the sides of the chest. For the most part no respiratory sounds are to be heard over the tumour, but weak or bronchial breathing may be audible.

In the progress of tumours effusions commonly take place into the pleural cavity and into the pericardium. The cardiac impulse is weakened, the sounds less intense, and the organ itself is often displaced. The superior cava is often compressed, with consequent dilatation of its tributaries and œdema of the face and upper extremities. Arteries offer greater resistance to pressure, but they become narrowed with consequent inequality of the radial pulses. Enlargement of the thyroid with some degree of exophthalmus have been observed, although rarely.

The trachea, the larger bronchi, sometimes undergo compression, the œsophagus also, causing dysphagia, the vagus and recurrent nerves with dyspnoea, alteration of the voice, or even although rarely aphonia. Pain to a greater or less extent is generally present. Enlargement of the axillary, or supra-clavicular glands, is also a sign of some value as establishing a probability of a malignant character of the intra-thoracic tumour. With the progress of the disease dyspnoea becomes more considerable; cough and expectoration are observed, and pain referred to the arm, neck, or back, or intercostal neuralgia may be present.

On the subject of the diagnosis of mediastinal tumours Professor Skoda<sup>1</sup> has contributed some observations.

The tumour is probably malignant, if the patient is old and cachectic, and if the glands in the neighbourhood of the sterno-mastoid or in the axilla are enlarged. Considerable and extensive interference with the function of the organs in the thoracic cavity point in the same direction, although these may also be to a great extent perverted by mere pressure or displacement.

Non-malignant growths are less common, and are slower in producing disturbance of the system at large. Pulsation may be noticed when the tumour is seated on an artery, or may be propagated from the heart. The non-expansive character of the pulsation and the usual absence of bruit serve to distinguish tumours from aneurism; but it is often a matter of difficulty to establish the diagnosis. Pericardial exudation may be mistaken for mediastinal tumour. Acute pericarditis, however, is accompanied by fever, and occurs in connection with some general disease, as acute rheumatism, Bright's disease, &c. Chronic effusion into the pericardium is also secondary to other affections.

Pleuritic effusion resembles some mediastinal tumours in producing bulging of the chest, dulness on percussion, diminution or absence of the respiratory sounds, &c. The differential diagnosis becomes especially difficult when effusion in the pleura coexists with tumour. If the tumour is connected with

<sup>1</sup> Allg. Wien. Med. Zeitung, No. 20 et seq., 1870. Prager Vierteljahrschrift, 1871, Band 1.

leucocythemia there is generally sufficient evidence elsewhere of the implication of the glandular system.—*Dublin Quart. Journ. of Med. Sci.*, May, 1871.

20. *Intra-pericardial Aneurism of Aorta*.—Dr. STOKES, Regius Professor of Physic in the University of Dublin, presented to the Pathological Society of Dublin (*Brit. Med. Journ.*, March 18, 1871) a most interesting case illustrative of some obscure points in the diagnosis of cardiac disease. The patient was a man aged 31, who six years ago was admitted to the Meath Hospital, suffering from "heart disease," most probably from pericarditis. At the time of his second admission, a short time ago, he was the subject of general anasarca. On physical examination, the liver was found to be much enlarged, its lower edge being felt just above the crest of the ilium. But the most striking physical signs were met with in connection with the heart. At its base a double murmur was audible, of which the first part was systolic, and the second corresponded with the diastole. This bruit became fainter when traced towards the apex, but at this point it was again distinctly heard. Besides the double basic murmur, a loud *frémissement* existed at the base. This sign disappeared at a subsequent period, but only to return. There was visible pulsation in the carotid alone, and the pulse partook to some extent of the characters of the collapsing form. Here then were all the usual signs of aortic patency, together with the basic *frémissement*, and a second double murmur at the apex. Dr. Hayden, who was asked by Dr. Stokes to see the case, suggested that the lesion was aneurism of the right ventricle. After death the left ventricle proved to be much hypertrophied, the aortic valves were found perfectly competent, though somewhat thickened; and a true aneurism sprang just above the origin of the aorta. The tumour was intrapericardial, and from the sac a fistulous passage led into the cavity of the right ventricle. There was, in fact, a varicose aneurism. The *frémissement* was now explained—its disappearance Dr. Stokes regarded as due to a temporary plugging of the fistulous openings. Cyanosis was never present, though before death the patient's aspect became unusually livid. Dr. Stokes mentioned that this was the second instance in his experience in which an aneurism springing in the neighbourhood of the sinuses of Valsalva had perfectly simulated the comparatively common disease, permanent patency of the aortic valves. Dr. Hayden stated that his diagnosis was founded on the following considerations. First, the murmur of exit possessed a peculiar character, one never remarked in simple valvular disease. It resembled the sound caused by the entrance of fluid into a resounding cavity, and might best be described by the word "splashing." Secondly, this murmur was not transmitted into the carotid vessels.

21. *Chloride of Ammonium in the Treatment of Hepatitis and Abscess of the Liver*.—Dr. STEWART, of the Royal British Fusiliers, observes (*British Burma Press*, Rangoon, 1870) that this drug has been for some time employed and valued by the Germans and the French in the treatment of diseases in which mercury and other alterative deobstruents are indicated, yet he has never found the salt particularly mentioned in relation to the treatment of hepatitis and abscess of the liver. After numerous and careful trials he now recommends the drug almost as a specific in such cases, and he states, moreover, that he has found it very serviceable in all cases of hepatic disease whatever, whether depending on organic disease or on functional derangement. The proper period for the exhibition of the remedy is after the abatement of acute symptoms, and when diaphoresis has been freely established, and it should then be administered in doses of twenty grains night and morning. About fifteen minutes after the chloride has been taken a sensation of warmth is experienced at the epigastrium, which gradually spreads over the whole surface of the skin. The patient at the same time says that he feels "light-headed." In cases of hepatitis the pain is either removed to a point higher up than the liver or is entirely relieved. Dr. Stewart gives a history of a number of cases, and shows that, during a nine months' trial of the salt, out of a total of thirty-one, not one was followed by a fatal result. He also highly recommends the chloride in cases of chronic dysentery, and advises the continuance of its administration for some time after the disappearance of acute symptoms.—*Brit. and For. Med.-Chir. Review*, April, 1871.