accordingly determined on. An incision having been made over it, as soon as the sac was opened it fell out, and rolled across the floor like a billiard ball. It was nearly round, white, and glistening exteriorly, without the least appearance of having had attachments. Its section showed a nucleus the size of a horse-bean, which consisted of fatty matters, enclosed in a very thin calcareous lamella, the whole being surrounded by layers of white glistening fibro-cartilaginous-looking structure, which made up the bulk of the tumour. The microscope had shown that the nucleus consisted of fat, its capsule of fibrous tissue, with ossific plates, and the outer portion of concentric laminæ of fibrinous material, which contained neither cells nor nuclei. Mr. Shaw thought the explanation of its most probable mode of formation was, that a portion of fat, perhaps one of the appendices epiploicæ, had got detached into the peritoneal sac, where it had become coated with successive layers of fibrinous effusion.

Mr. Gray mentioned a case in which had formed five or six cartilaginous bodies in the cavity of the pleura, two of which were quite loose, and others had small pedicles, and were evidently on the point of becoming detached, while one was fairly beneath the serous membrane. In none of these, or similar ones which he had examined, had he ever found the structure of true cartilage.

Mr. Sibley stated, that he had made a microscopic examination of the specimen exhibited, at Mr. Shaw's request, and could confirm the account of it given by that gentleman. There was nothing like a cartilage-cell seen; and, indeed, no cells of any kind, though, by oblique sections of the concentric laminæ, an appearance much simulating that of compressed cells, arranged in parallel direction, was sometimes produced. He quite agreed with Mr. Shaw as to the probable nature of the body.

Dr. Habershon exhibited a specimen of

HYDATID IN THE PERICARDIUM.

The heart was removed from a girl, aged 16 years, a patient of Dr. Barlow's, who had, a year before, had rheumatism, and was admitted into Guy's with urgent dyspnœa, etc. On inspection, both pleural cavities were found universally adherent; the heart was considerably hypertrophied and dilated; the pericardium adherent; and between the right auricle and ventricle was a cyst containing about two ounces of pus, in which were numerous hydatid cysts, having secondary ones attached to their inner wall; the larger cysts were about half an inch in diameter; the smallest 1-16th of an inch. These cysts were composed of very numerous layers, beautifully defined, and on their inner surface presented a stratum of granular matter; but no echinococci or cysticerci could be detected after very careful examination. The mitral valve was opaque, somewhat contracted, and presented minute vegetations. The other valves healthy. There was much congestion of the liver and kidneys, and other abdominal viscera.

Dr. Habershon also exhibited

A HEART AFFECTED WITH PERICARDITIS AND FALSE ANEURISM AFTER DISEASE OF THE AORTIC VALVE.

It had been taken from a woman, aged 23, a patient of Dr. Rees', who had slight rheumatism, was much anæmiated, and, four days before her death, suffered from very urgent dyspnœa; there was a diastolic bruit. The anterior and left aortic semilunar valve was found almost destroyed, and its place occupied by a very irregular mass of fibrinous vegetations. A band of these vegetations extended quite across the orifice of the aorta, and a pendant clot of blood was attached to it. Behind this valve, close to the orifice of the coronary artery, was a pouch extending into the substance of the ventricle, burrowing about half-an-inch behind the mitral valve, and nearly passing through into the pericardium. Close to the left auricle it formed a prominent tumour. The cavity was not lined by a defined cyst, but contained a mass of fibrin, soft and semifluid in its centre; the fluid had the microscopical character of pus. The right aortic valves, the mitral, and the valves on the right side, were healthy. The pericardium contained eight ounces of serum, with some flakes of lymph, and near the left auricle a thin stratum of lymph. The heart was slightly enlarged. There was inflammatory effusion into both pleural cavities, and much œdema of the lungs. The kidneys were full of cysts, and presented evidence of recent inflammatory disease.

The President stated, that during a former session he had himself exhibited a specimen resembling the present one, excepting in that it was either the right or the posterior valve which had been affected, and that the softening had all but opened into the left ventricle. Mr. Avery had also shown to the Society an almost similar one. He had no doubt of the correctness of the pathological explanation offered by Dr. Habershon, but objected to the term "false aneurism" being applied to such a condition. A false aneurism might undoubtedly be so produced, but in its first stage he thought the disease could be scarcely considered as such.

Dr. Ogle exhibited a specimen of

A CYST THE SIZE OF A WALNUT, CONNECTED WITH THE SURFACE OF THE CEREBELLUM.

The preparation showed a cyst formed out of the thickened arachnoid membrane and subarachnoidean tissues, apparently the result of the limitation of fluid effused during inflammation of these membranes. The arachnoid in other parts was thickened, and two other cysts existed in the membranes, one like the present one, and like it containing limpid yellow fluid; and another containing purulent fluid. The patient had no symptoms during life referrible to the cysts, and died of extravasation of blood into the substance of the right cerebral hemisphere. Considerable destruction of the surface of the cerebellum had been produced by the pressure of the cyst, which seemed to illustrate the method by which, in some cases, appearances like a congenital deficiency might be produced.

Dr. Ogle also exhibited samples of

FIBRINOUS CLOTS IN THE CEREBRAL SINUSES AND VEINS.

The left lateral sinus, as far as the posterior jugular foramen, the inferior longitudinal sinus, and also the straight sinus, with numbers of veins tributary to these were full of dark-stained, firm fibrin, which in one or two places had begun to soften. No softening or discoloration of the brain existed, and the commencement of the vein, within the brain or between the convolutions, was quite unaffected. There was no disease of the ear, but the tympanic cavity and the mastoid cells were distended with clear serum. The patient died exhausted by stricture of the rectum, and there was no reason why the coagulation of fibrin in the veins should not be considered simply dependent on a peculiar condition of the blood, independent of any local poisoning, etc.

Dr. Gibb showed

A SKULL AFFECTED WITH SYPHILITIC CARIES.

The skull was that of a prostitute who had died in the Montreal Hospital, after having for years suffered from the combined effects of syphilis, mercury, and a most irregular life. Over almost the whole surface of the skull there had been periostitis, with caries, and exfoliation of layers. In some parts the dura mater had been exposed. There had been destruction of the vomer and bones of the nose, and disease also of most of the other osseous structures of the body.

Dr. Gibb also brought forward a specimen of

EXOSTOSIS FROM THE ZYGOMA.

The growth had a broad base, was the size of a small marble, and situated on the posterior part of the base of the left zygoma.

After the usual vote of thanks to the exhibiters of specimens, the meeting adjourned.

EPIDEMIOLOGICAL SOCIETY.

MONDAY, DECEMBER 4.

DR. BABINGTON, President, in the chair.

Dr. M'William read a paper by Mr. Bodington, of Sutton Colefield, on the

SALUBRITY OF BIRMINGHAM AND ITS SUBURBS,

AND THE COMPARATIVE IMMUNITY OF THAT TOWN FROM ASIATIC CHOLERA AND OTHER EPIDEMIC DISEASES.

THE author alluded to the elevated situation of Birmingham, its light sandy loam with a gravelly subsoil, its good sewerage, the comparative healthiness of the pursuits and habits of the people, the absence of extreme poverty, and other advantages which were supposed to constitute the chief reasons for the salubrity

of the town. He did not, however, entirely attribute to these the comparative immunity of the town from cholera, but thought that circumstance better explained by the constant diffusion of mineral acid gases throughout the air from the many establishments where sulphuric acid, aqua fortis, and other similar bodies were manufactured. The author mentioned various circumstances to prove the effect of these gases on vegetable and animal life, and suggested whether they might not be made available in mines for the purpose of rendering the fire-damp inexplosive.

Dr. Snow said there were other large towns where the mineral acid gases were diffused through the air as in Birmingham, but which were, nevertheless, not exempt from cholera. Birmingham itself was not altogether exempt. In 1849 there were registered 29 deaths from cholera, and, curiously enough, no less than 427 from diarrhœa, the usual proportions being thus reversed. It was, he thought, possible, that many deaths from cholera might have been registered under diarrhœa, with a view of keeping up the credit of the town. Cholera he thought more dependent upon the supply of water than the gases in the atmosphere. The water in Birmingham was brought from a distance, and was generally pure. It was the same in Leicester and Nottingham. In 1832 Nottingham suffered considerably. At that time the supply of water was obtained from the town itself. Since then it was procured from above the town, and was filtered, and the result was, that in 1849 and 1853 there had been very little cholera.

Dr. Lewis did not consider Birmingham so healthy a town as many supposed, there being in it much mortality arising from preventible disease. It certainly had not been severely attacked by cholera; and this, he thought, was in a great measure owing to the nature of the soil, the dwellings, the drainage, and the absence of extreme poverty, so that the working classes did not lack good nourishment. He mentioned, with a view to show that cholera was not very contagious, that in two neighbouring towns, Bilston and Wolverhampton, the disease was extremely prevalent.

Dr. H. Gavin referred to the excessive mortality from cholera in Newcastle, and stated that some of the most fatal districts were those in which great quantities of the mineral acid gases were given off day and night. This was especially the case in the district of St. Peter's. The subject of the influence of sulphurous acid gas on cholera was worth investigation. The combustion of sulphur in the wards of Hospitals had been tried to some extent, and it was believed with success. But on the other hand, in the ironworks in the West of Scotland, where sulphurous acid gas and sulphuretted hydrogen were given off in large quantities, cholera prevailed extensively.

Dr. Webster said, that, from an examination which he had made as to the salubrity of different towns, he believed Birmingham to be the most healthy town in England, fewer persons dying in a hundred than in London itself. He attributed the healthiness of Birmingham to its elevated situation, its central position as regards England (inland towns being more healthy than those on the sea coast) and the general carefulness of the inhabitants in regard to diet. He did not believe in the efficacy of the mineral acid vapours. On Kennington Common there was a large acid factory, the fumes from which were at times most offensive, and in that neighbourhood cholera was very violent.

Dr. Headlam Greenhow stated the atmosphere in Newcastle and its neighbourhood was continually vitiated by acid vapours which had no effect in diminishing cholera. The salubrity of Birmingham he attributed to the width of the streets, good ventilation, and sewerage. The deaths in Birmingham, however, were 26¼ in a thousand, which was certainly a higher number than in many towns which he could name, and even in some which were visited with cholera. The geological condition of Birmingham was the same as that of Liverpool, Sunderland, Manchester, and Wolverhampton, in all of which cholera had appeared.

CHOLERA IN GOLDEN-SQUARE.

Dr. Snow exhibited a map, showing the deaths from cholera in the different houses in the neighbourhood of Golden-square, together with a statistical table, showing the dates of attack, etc. It appeared that the greatest number of attacks were on the 1st of September; and the great centre of Mortality Dr. Snow stated to be the neighbourhood of Broad-street pump.

The map was handed round, and after some brief observations by the members present, the Society adjourned to February.

WESTERN MEDICAL AND SURGICAL SOCIETY OF LONDON.

FRIDAY, December 1.

Dr. BARCLAY, Vice-President, in the Chair.

SEVERAL gentlemen were elected members of the Society.

Dr. Baines read a paper on

DIURETICS AND THEIR USES.

After some introductory remarks of a general character, he divided diuretics into two classes,—the direct and the indirect. The direct were considered as local stimulants to the kidneys, their active principles being conveyed to the glands, and thereby exciting them to increased action. Some of these excite the same action, by being excreted entire by the kidneys, as is the case with nitrate of potassa, which salt is always found to be thrown out of the system in the same proportion as it has been administered. Other salts of this class, however, experience some change in the body, their elements becoming re-arranged, and are presented to the kidneys in different states to those in which they were administered; thus, the acetates and tartrates become carbonates, and in this state produce their effects upon, and are excreted by, the renal organs. Analogous facts were mentioned as occurring during the administration of mercury, when the bile has been found to contain traces of the mineral, as also, that ether and alcohol were found in the brain, an organ upon which their specific effects are produced. In the case of indirect diuretics, however, the fact is different, their effects being caused through the system generally, rather than by any positive action on the glands themselves. Some of these produce diuretics secondarily, the primary effect being manifested on the absorbent system generally, whereby the blood becomes charged with water, and the kidneys then are called upon to excrete it from the blood. Mercury and iodine were adduced as examples of this class. Other indirect diuretics act primarily on the stomach, and secondarily upon the kidneys, this end being accomplished either by lessening arterial action, and thereby promoting absorption, or by increasing the quality of the blood, and so causing the kidneys to share in the general improvement of the body. Examples of this kind are seen in digitalis and the preparations of iron. The beneficial effects of digitalis in cases of dropsy were then discussed, as was also the necessity of relieving the portal system in cases where the liver and its veins were gorged and congested, before we could hope to rouse the renal glands to increased action. Colchicum, mercury, and taraxacum were instanced as examples of diuretics acting indirectly by relieving the portal system, if congestion be present. The circumstances modifying the action of diuretics were stated to be—1. The state of the skin, a profuse perspiration preventing the establishment of a full diuresis. 2. Active catharsis suspends the operation of diuretics by divesting the fluid of the system from the kidneys to the intestinal glands; a good instance of the kind being seen in Asiatic cholera, in which the kidneys do not act, simply because all the fluid of the body is drained off by the stomach and intestines. 3. No obstruction must exist in the course of the intestinal canal to prevent the flow of the medicine swallowed, as shown by Dr. Barlow. 4. If there be extensive disorganization of the kidney, the due secretion of urine cannot take place. 5. If the anasarca or ascites be very extensive, the pressure consequent upon it acting upon the veins and lymphatics prevents the absorption of the remedies, and of the fluid to be evacuated; in these cases, tapping or puncturation of the limbs must first be resorted to, and then, the pressure being removed, the kidneys are more easily stimulated by the action of diuretics. The subject of the dilution of the saline diuretics was then alluded to, and as their absorption was considered to depend upon the ordinary principles of endosmose and exosmose, the opinion that to be absorbed, and to act as diuretics, they must be so far diluted as to be below the specific gravity of the serum of the blood, was upheld; otherwise, in the place of a diuretic action, a purgative effect would be produced. The effects of acetate and bitartrate of potassa were instanced as bearing out this view. Blood depuration by the kidneys was then considered, and viewed as possible in some cases. The various cases in which the blood in disease is, by means of the kidneys, thus naturally depurated, were mentioned. Thus, in jaundice, where the flow of bile, or its secretion, is impeded, the urine often eliminates it from the system. Again, in cases of portal congestion, the urine becomes loaded with purpurine; and in excessive pulmonary disease, Dr. Hassal has detected indigo in