that was the retention of a sufficient quantity of urine in the bladder to make it safe or indeed easy to seize the stone and to crush it without danger of implicating the mucous membrane. This inconvenience, however, Mr. Erichsen had obviated by tilting the pelvis backwards, and by compressing the urethra against the instrument.

Mr. Erichsen had found the ordinary male lithotrite a very awkward and unhandy instrument for manipulation in the female bladder, the shaft being too long. He had accordingly had constructed a female lithotrite, about three or four inches shorter than the ordinary male instrument, which possessed the advantage of being less unwieldy.

In the case just related, however, Mr. Erichsen used a strong though small pair of forceps for the purpose of crushing the stone; and he found that with them the operation of lithotripsy was more conveniently done than with any form of lithotrite. He has accordingly had constructed, and showed to the class, a very strong pair of crushing forceps, narrow in the blade, well toothed, and accurately adjusted, the blades of which are approximated by the action of a powerful screw. This instrument, the blades of which can be introduced into the female bladder with a very trifling degree of dilatation of the urethra, is as handy in its use as an ordinary lithotomy forceps, and at the same time sufficiently powerful to crush any moderate sized calculus, such as is usually met with in the female bladder. This instrument, when made proportionately large and strong, and fitted with a wedge-shaped cutting-tooth inside one of its blades, might be used as a crusher in those cases of lithotomy in which the stone is found to be too large to be extracted through the incisions in the perineum.

CITY DISPENSARY.

CASE OF HEART-DISEASE.

By JOHN COCKLE, A.M., M.D., F.R.A.S., Member of the Royal College of Physicians, Physician to the Dispensary, etc.

SUMMARY. *Extreme Dilated Hypertrophy of the Heart, hereditary, congenital (?), without Valvular Disease: Pericardium universally adherent to the Heart: Firm Adhesion of Pericardium to Left Costal Pleura: Cirrhosis of the Liver: Degeneration of the Kidneys.*

CASE. Robert Pearson, aged 41 years, spirit distiller, was admitted in December 1845. *Previous History.* Five of his family, including his mother, had died within fourteen years from disease of the heart. From his earliest infancy he was subject at times to cough, difficulty of breathing, and throbbing of the heart; he was also very susceptible of cold. With these exceptions, he had enjoyed tolerable health up to the year 1853. Some time prior to this period, however, he had been addicted to the excessive use of ardent spirits, which habit he had now altogether abandoned. At the period named, he for the first time suffered from pain and uneasiness in his loins, attended with frequent micturition, more particularly by night: indeed, this latter inconvenience so much attracted his attention that he frequently observed to his wife how strange it was that, whether he took fluids or totally abstained, the irritation of the bladder by night continued the same. A few months after the accession of these symptoms, he complained of pain in his chest, for which he was in the habit of applying mustard poultices of his own accord, and, usually, with at least, temporary relief. He had never, however, any marked attack of thoracic inflammation, nor had he ever suffered from rheumatic fever. His health now gradually gave way; the uneasiness about his chest, with palpitation, dyspnoea, and cough, being more or less constantly present. In August last, he was suddenly attacked with severe pain and tenderness in the right hypochondrium and abdomen, with bilious vomiting; and it was then supposed by his medical attendant that the liver was in a state of acute inflammation. Shortly afterwards, dropsy supervened, first attacking the legs, and then the abdomen. From this at-

tack he recovered sufficiently to resume his occupation for a short time. About Christmas, the dropsy recurred, the same sequence being again observed with regard to its progress; and it was at this period he first came under my care. The following observations were made.

Inspection. Face anxious, congested; eyes lachrymose; nares dilated, in forced action; lips and tongue slightly livid; distension permanent even during inspiration, with occasional pulsation of the jugular veins, throbbing of the carotids, with rhythm disturbed from time to time. Chest broad, symmetric, without either præcordial bulging or retraction; no constant visible impulse; occasionally, faint undulatory movement. According to his wife's statement, however, the heart palpitated violently at times. Respiratory movements quickened, thoracic, and extraordinary in their character. Abdomen enormously distended to the ensiform cartilage. Feet, legs, and thighs, greatly swollen; both feet and hands of bluish tint. Orthopnoea.

Palpation. No impulse, or but a faint one perceptible. Apex difficult to determine. No *frémissement* or arterial thrill. Pulse about 90, occasionally irregular, generally soft and full.

Percussion. Unusual amount of præcordial dullness, extending nearly across the chest; lower border difficult to limit with accuracy, from the commingling of intestinal tympanitic note. Pulmonary sound obscure over chest generally. The abdomen yielded a tympanitic note above, gradually replaced by dullness towards the middle and lower portion.

Auscultation. The heart, examined with the stethoscope, conveyed no sense of heaving or concussion to the ear. The systolic sound, explored about and above the normal site of apex, was indistinct; and such absence of sound of closure existed as to lead to the suspicion that the mitral valve was diseased. The second sound existed with distinctness, and was tolerably diffused. At neither aortic or pulmonic cartilage did any great difference of accent exist. No trace of murmur, or indeed of any abnormal sound, could be detected over any portion of the cardiac region. Occasional arrest of the heart's beat was observed. Sibilus and muco-crepitant râle, though varying in amount, existed pretty generally over the lungs. The expectoration was usually copious; and, on standing, heavy yellow mucus was seen, covered by a thinner transparent portion.

The urine was scanty, and always, when examined, highly albuminous. After taking elaterium for some time, the dropsy was again so much lessened as to admit of his walking out once or twice; but the effusion rapidly recurred, resisting all treatment. His former symptoms were greatly aggravated. The function of the kidneys was nearly suspended. Drowsiness and occasional delirium, not violent, supervened; and he sank, apparently in a faint, about three months from the time of his admission.

The *Autopsy* was made about thirty hours after death, by Mr. J. A. Kingdon, Dr. Webb and myself being present. The body was not much emaciated. The face, hands, anterior and posterior surfaces of the body, exhibited over a large part of their extent a deep red colour, probably owing to the semi-erect position which he had for so long a period preceding his decease been compelled to maintain. The walls of the abdomen (which was enormously distended) had already assumed a deep greenish hue. A tympanitic note was elicited by percussion over the upper part of the abdomen, while the lower part and sides yielded a duller one, from the presence of the contained fluid. Upon percussing the chest, it was found that the area of the heart's dullness was greatly increased, extending along the border of the diaphragm for several inches on each side of the sternum, and upwards as high as the superior border of the third rib. The area of dullness had not the regular pyramidal form of pericardial effusion, but rather resembled the figure of a scalene triangle, the most acute angle of which would correspond with the lower end of a line drawn directly downwards from the right nipple to the diaphragm.

Before commencing the section, a trocar was introduced

through the abdominal walls, and the quantity of fluid so obtained, added to that removed upon the parietes of the abdomen being divided, amounted to nearly one and a half gallons. The fluid was limpid, and of a citron colour.

After having removed the sternum by sawing through the ribs, the costal cartilages being ossified, the pericardium, which, with its contents, appeared to occupy the greater portion of the thoracic cavity, was found firmly adherent to the costal pleura. The adhesions were in bands and completely organised. The left lung, from between the second and third ribs downwards, occupied only the lateral and posterior portions of the chest, the anterior portion from the ribs named being occupied by the heart and its covering, so that the lung seemed to have been mechanically displaced. The same displacement existed, though to a less extent, upon the right side. The lungs were bound down by firm adhesions, laterally and posteriorly. These organs were small, anæmic, and appeared compressed, though, in other respects, tolerably healthy. Upon opening the pericardium, it was found universally adherent to an immensely hypertrophied heart (*cor bovinum*). The adhesions were organised, but were broken down by a moderate amount of force. The heart, of obtusely triangular pyramidal form, occupied a position exactly transverse in the thoracic cavity. Upon removing this viscus from the body, and dividing the great vessels nearly to the base, it was found to weigh, with its contained blood, two pounds fourteen ounces avoirdupois. Its weight, subsequently to the emptying of its chambers, was exactly two pounds avoirdupois. The contents consisted of dark grumous blood, decolorised fibrin loosely entwined among the tendinous chords of the left ventricle, and a clot, partly organised, and firmly adherent to the smaller and posterior flap of the mitral valve. The walls of the left ventricle exceeded twelve lines in thickness; those of the right ventricle might be estimated at about six. The cavities were greatly dilated. Both auricles were also thickened and greatly dilated; the right auricle exceeding three lines. The walls of the left ventricle did not possess their usual firmness, being inclined to collapse when incised. The thickening seemed to involve the entire muscular structures of both sides. The auriculo-ventricular orifices were largely dilated, so as not nearly to be closed by the valves (secondary insufficiency). Both arterial and venous valves were perfectly healthy, with the exception of hypertrophy (conservative) of the fibrous tissue of the mitral valve. No change existed in the great vessels.

Abdomen. Reference was before made to the quantity and physical character of the fluid contained in the abdominal cavity. The small intestines were generally and considerably congested. The stomach and colon exceedingly distended by flatus.

The *liver* was less than the ordinary size, not nodulated, and quite concealed by the false ribs. Its capsule was very greatly thickened, white, and opaque, except here and there, where were seen small circular patches, allowing the colour of the subjacent tissue to show through, and looking as if they had been removed by a punch. The substance of the gland was of a pale brownish yellow colour, apparently anæmic, easily broken down and disintegrated. Under the microscope it was found to consist of the normal cells, containing biliary matter, and other granules, over which latter elements either seemed to produce no effect.

Kidneys. The right kidney weighed eight ounces, the left seven ounces and a-half. The capsule of each kidney peeled off most readily, and showed hæmorrhagic patches upon the opposed faces of gland and capsule. The internal structure of both these organs, but more particularly that of the left, presented upon section the most perfect nutmeg appearance. Upon examination with the microscope, the uriferous tubules were seen completely filled with epithelium cells and granular matter. The tubes also seemed to be lying in a mass of the same granular material.

REMARKS. This case presents several points of high interest and instruction. There obviously existed a strong hereditary predisposition to cardiac disease, and probably a

congenital disproportion of the size of the heart, relatively to the other viscera; but, by a principle of adaptation in the economy, no such amount of disease, as to be incompatible with the maintenance of life, was developed until the secretory function of the kidneys was seriously impaired by the additional excitement of alcoholic stimulus. Doubtless these organs were strongly predisposed to organic change, by the permanent congestion induced by disproportion of the right chambers of the heart. Soon after the supervention of renal symptoms, the standard composition of the blood became perverted, and gave evidence of such alteration by inducing pathologic changes in the serous tissues. The heart was thus secondarily affected, and further hypertrophied, independently of valvular change, in conformity with the law laid down by Dr. Bright. Not only were the pericardium and pleuræ texturally changed, but the capsule of the liver was manifestly diseased; so that the gland might be considered in a condition of incipient cirrhosis, the morbid changes not yet having proceeded to the extent of inducing the physical phenomenon dependent upon contraction of the exudation matter. It is not difficult to conceive how life was terminated, when it is considered that the enlarging heart, imprisoned in the chest, and further encroached upon in its action by the abdominal tumefaction, was, as it were, paralysed, and, except in fitful struggles, incapable of exerting its ordinary amount of contractile power. The lungs, again, from intrathoracic and abdominal pressure, were crippled in their action, and their nervous stimulus still further lessened, by the semi-comatose condition induced by uræmic poisoning.

With regard to the auscultatory phenomena there exist, again, points replete with practical instruction. Independently of the absence of valvular disease, there existed no obvious signs of such great dilatation and hypertrophy. Notwithstanding all that has been written since the time of Laennec, respecting the easily recognised signs of dilated hypertrophy, cases are by no means unfrequent, in which such signs are altogether absent; and I feel no hesitation in asserting, that auscultation alone has often failed to reveal an enlargement of the heart during life, which has been too manifest upon a *post mortem* examination. When the lung will admit the accurate percussion of the heart's area, such procedure affords the only check, in a physical sense, against the error alluded to. One other point I think worthy attention. It is quite conceivable, that the adherent pericardium might contribute its *quotum* towards aggravating the existing hypertrophy, might prevent the normal impulse, muffle the first sound, and even render the definition of the apex difficult; but it is not at all intelligible, either upon pathological or anatomical grounds, why, as some authors assert, an adherent pericardium should cause the extinction of the second sound. In the case detailed, it was, on the contrary, both distinct and diffused. I do not think that this case tends to elucidate the question respecting the influence of adherent pericardium in inducing atrophy of the heart, as the adhesions were comparatively too recent to permit any judgment being arrived at.

Original Communications.

CONTRIBUTIONS TO MILITARY SURGERY IN THE CRIMEA.

By an EYE WITNESS.

THE following are some cases of gun-shot wound which occurred at the storming of the Malakoff and Redan.

CASE 1. Varcetia Machavieo, aged 32 years, a Russian prisoner, was wounded at the Redan on September 8th, 1855. A minié ball passed through the deep seated muscles of the neck on the posterior aspect, from right to left, coming out almost on the same level. It entered immedi-