

sounds at the apices of the lungs, dulness at the lower part of the left lung behind, and at the upper part of the right. The respirations were thirty-six in a minute; the expectoration was mucopurulent, and brought up with difficulty. The skin was hot, and he had night sweats. He was ordered a nitre draught with nitric ether, juniper, and squills, and good diet. On the following day, six ounces of gin were ordered, and some tincture of steel added to the draught. The breathing became easier, but he slept little. The puffiness of the face was less marked, but œdema of the legs showed itself, and gradually increased during the next four days.

The urine was examined and found free from albumen, but scanty and high coloured. He complained of great thirst, and was extremely restless during the night. He then sank gradually into a state of unconsciousness, and died on the seventh day of his stay in the house.

On *post mortem* examination, a very extensive deposit of tubercle was found in the cellular tissue of the thorax and anterior mediastinum, and in that which covers the spine in the abdominal region. In the former situation this deposit formed a large mass, which lay just below the sternum, surrounding the great vessels, and affected the pericardium. On the outer surface of this latter membrane several small hard nodules were found, very movable, and having only a loose attachment to the serous membrane. Similar nodules existed on the reflected portion of the membrane covering the aorta and pulmonary artery. The bronchial glands were extensively affected, and pressed upon the lung so as to project in between its lobules. There was a rather extensive deposit of miliary tubercle in the lungs. The general mass was formed of crude cheesy tubercle, mixed in varying proportions with fibrous tissue, and, for the most part, contained in oval or circular spaces, out of which it could easily be scraped. In the abdomen, the deposit formed a large tumour, extending from the crura of the diaphragm to the pelvis, several inches in breadth and thickness, and weighing 3lb. 10 oz. This large tumour completely surrounded the aorta, vena cava, and other large vessels. It had raised up and displaced the pancreas. Most of the abdominal viscera lay in the grooves between its lobes, but were quite unaffected by it; except the spleen, the substance of which contained a very extensive deposit of crude tubercle. The brain was found healthy. The peritoneal cavity contained much purulent fluid, and this inflammation seemed to have been the immediate cause of death.

REMARKS. This case appeared to be of sufficient interest both as to pathology and diagnosis to deserve mention. The diagnosis was hardly possible, in as much as no physical signs could be found in the chest of the large tumour which really existed there, and the inflammation of the peritoneum rendered it impossible to detect the large tumour which lay upon the spine. The appearances which were found were certainly uncommon, but are quite sufficient to account for all the symptoms. The fluid in the peritoneum, the œdema of the face and lower extremities, all so exactly resembled the symptoms of Bright's disease, which his puffed anæmic countenance also simulated, that it was only the examination of the urine which could convince those about him that he was not sinking from diseased kidneys; but the pressure on the peritoneum sufficiently accounted for the inflammation of that membrane, and the involvement of the veins in the tumours of the thorax and abdomen for the anasarca. Death appeared to be due to perverted nutrition, originally, though immediately, to the subacute peritonitis induced by the tumour.

### KING'S COLLEGE HOSPITAL.

#### ANEURISM OF THE AORTA.

Under the care of G. JOHNSON, M.D.

[From Notes by Dr. WHITFORD, House-Physician.]

CASE I. Geo. J., aged 34, a stone sawyer, whose work employed him on an average twelve hours a-day, was admitted under Dr. Johnson's care on December 22nd. He was stoutly built, but with a somewhat dusky hue about the face and lips. He had had good general health, except that eight years ago he had some seizure, in which he lost consciousness, and was bled from both arms, and afterwards taken to a hospital, where he was again bled, and cupped over the region of the heart and in the nape of the neck.

Three months ago, while engaged in lifting a heavy mass of stone, he suddenly felt pricking pain in the right side, a little below and external to the nipple, which increased so that three

weeks afterwards he was obliged to leave off work. After five weeks of treatment, however (principally by blisters), he so far recovered as to be able to resume his occupation. A fortnight before admission (December 8th) he noticed that his face was swelled and flushed, and experienced a pain in his right shoulder, from which he has never since been quite free. On the morning before admission, he noticed a slight swelling on the walls of the chest. The pain was aggravated by a violent cough. He spat but little, the sputa being occasionally tinged with blood from the mouth. His face became much congested after coughing or exercise, and the superficial veins of the neck were much distended. On examination of the chest, a somewhat flattened swelling was found at the upper part of the sternum, involving the left side of the manubrium and the two or three upper costal cartilages with the anterior extremities of the corresponding ribs. It had a vertical diameter of about two inches, and a transverse one of rather more. It was dull to percussion. There was a slight heaving impulse; and on auscultation two sounds were heard exactly resembling those of the heart, but rather louder. The breathing in the right lung was more feeble than in the left. The heart might be felt pulsating rather lower than usual. Bronchophony over the second dorsal vertebra was louder than usual, as if the trachea were pressed backwards. The pupils were observed, and were natural.

He went on without any important change; the tumour, however, seemed more inclined to bulge at one point. As, however, he had lost his cough, and was much more comfortable, he was allowed to leave the Hospital on January 26th.

CASE II. Mary G., a servant in the Hospital, was admitted under Dr. Johnson's care on January 8th, on account of cough, dyspnoea, pain in the right shoulder, and tenderness to pressure below the right clavicle. She was a strong, healthy-looking woman, of florid complexion, thirty-five years of age, unmarried, and had always enjoyed excellent health, except that three years ago she had an attack similar to the present, and consulted a surgeon in Suffolk, where she then was, who told her that her symptoms proceeded from "dilatation of the aorta." From that time up to the present she had never experienced any uneasy sensations. On examination of the chest a slight but diffused swelling was observed below the right clavicle, and on percussion it was found that the healthy resonance of this part was replaced by extended dulness. The breathing on this side was puerile; on the other so low as to be hardly audible in the recumbent position. Two loud sounds, similar to those heard over the region of the heart, were perceived in the tumour, but there was no *bruit*. The breathing over the whole of the left lung was very feeble, and over the apices of the second and third dorsal vertebra there were loud bronchial breathing and bronchophony, an exaggeration of the natural condition of this part. The pulse in the right wrist was slightly weaker than that in the left. The pupils were quite natural.

In this case, also, no marked change occurred during the stay of the patient in the house. She left on February 23rd.

REMARKS. We have given the above cases as part of the series of thoracic aneurisms which we are at present publishing in this part of the JOURNAL; and they will therefore be commented upon on the termination of that series. They are of interest, as showing the nature of the symptoms of that affection, and the length of time it may run. In that light they will be hereafter considered, and compared with other cases.

### ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.

REPORT OF OPERATIONS PERFORMED FROM FEBRUARY 1ST  
TO MARCH 1ST, 1858.

By C. BADER, M.D., Registrar.

EYEIDS. Two cases of entropium of the upper and lower lids were treated by grooving the anterior surface of the fibro-cartilage near and parallel to its palpebral edge; and one case was treated by removing the portion of the lid which includes the eyelashes. In the three cases, bleeding was prevented during operation by the compressorium forceps. In one case, the palpebral aperture was narrowed for the reception of a glass eye, by removing an oval piece of the conjunctiva of the lower lid.

In one case, injury to the eyelid had produced paralysis of the palpebræ and laceration of the lower lid; the latter had

been torn just to the inner side of the lower lacrymal punctum, where it is peculiarly apt to give way when mechanical force acts on the lower lid. The ectropium of the lower lid has been remedied by excising a V-shaped piece of the everted portion, including the cicatrix; the cut surfaces then being brought together with sutures, and the palpebral margin carefully adapted.

One case of ectropium, with everted lower lacrymal punctum, has been satisfactorily treated by Mr. Critchett's plan of excising the posterior lip of the slit-up lacrymal canal.

STRABISMUS. There were fifteen cases of internal strabismus. In thirteen of them, both internal recti were divided subconjunctivally.

A ready explanation has been afforded by the ophthalmoscope in cases in which vision was very defective. Where both recti had been divided, the cosmetic effect of the operation was most complete.

In one case of internal strabismus which had been operated upon three years ago (by the subconjunctival method?), slight external strabismus began lately. The case would not invalidate the value of the operation, since there is a disease of the retina, and there have been repeated divisions of each internal rectus at different periods. Both external recti were divided after the old method.

CORNEA. Two cases of staphyloma of the anterior portion of the globe (consequent on injury) were treated by removal of a part (cornea) of the staphyloma with the cataract-knife. Troublesome bleeding and sickness followed the operation, although wet lint had been put on immediately, and pressure applied. The patients left the Hospital, the one on the fifth, the other on the fourteenth day after the operation. The blood which fills the globes will be absorbed gradually, and, after a long and troublesome treatment, a glass eye will be worn. The cases are good illustrations of the simplicity of excision.

One case of conical cornea was treated by Mr. Critchett by excision of both crystalline lenses. The right eye had been successfully operated upon two months ago; the left lens was broken up with the needle on January 22nd. On the 23rd, the swollen lens-substance was removed by a small corneal wound. The consequent pain and irritation (treated by leeches and hot fomentations) subsided after a fortnight, when the patient left the Hospital. Three weeks later, he was able to read ordinary type with a strong concave glass (No. 17). The defect of vision commenced ten years ago, after a severe illness (affecting of the spine).

IRIS. There were two cases of detachment of posterior adhesions of the pupillary margin, consequent on specific iritis. No inflammatory symptoms were present at the time of operation. Both (patients of Mr. Streetfield) were much improved; the one, who could see lines on a printed page before operation, read ordinary sized type two weeks after the operation. The broad needle and blunt spatula were used, as usual.

In one case, adhesions of the iris to a corneal cicatrix were detached, preparatory to the treatment of traumatic cataract.

In one case, a foreign body in the iris had entered the eye the day before, probably through the sclerotic. The pupil was contracted; and a small whitish nodule of lymph was visible near its inner pupillary edge. The irritation and conjunctival redness were considerable. Mr. Bowman made a small corneal incision at its outer edge. On extracting the nodule of lymph with the cannula forceps, a very small black body fell into the anterior chamber, and was removed with the scoop. Four days later, the eye had returned to its normal state.

In four cases, an artificial pupil was formed on account of corneal opacities. Where these were central, the pupils were formed opposite the inner corneal edge. In one case, a silk ligature was placed round the portion of iris withdrawn, with the view of making it form a nodule outside the cornea, and preventing it from slipping back. The silk would not hold the rotten iris-tissue. In the other cases, the portion of iris was either left in the corneal wounds or partially removed with scissors. In a case (patient of Mr. Wordsworth) of adhesion of the whole pupillary edge to a corneal cicatrix, part of the iris was detached with the broad needle, withdrawn with the hook, and snipped off.

Excision of the upper fourth of the iris, for glaucoma, was performed in three cases. In two of them, both eyes were operated upon simultaneously. Hardly any inflammatory symptoms followed the operations, but vision was not improved. The ophthalmoscopic appearances in all were, cupping of the entrance of the optic nerve, partial loss of transparency of the retina, etc. The patients were of the ages of 70, 64, and

60; vision had been lost gradually, and without pain. The consistence of three of the globes was normal; three were harder. The pupils were inactive; their areas were greenish; there were no enlarged ciliary veins.

CRYSTALLINE LENS. Two cases of uncomplicated cataract, at the ages of 60 and 32, were operated on. The latter case had been operated upon for internal strabismus a week before. In both cases, the lens was removed through an upper corneal section. In the one, the iris was wounded; in the other, some vitreous humour came forward before the escape of the lens. The patients were able to read common type on leaving the Hospital, three weeks after the operations.

One case of extraction was performed on a patient aged 45, whose eyes spontaneously inflamed ten months ago. At the time of operation, both pupils were occluded by a greyish white exudation, the anterior chambers were large, and the aqueous humour yellowish, without other inflammatory symptoms. The right eye perceived, the left recognised, large objects. The left lens, which was slightly yellowish, transparent, and of the consistence of jelly, was extracted. The adherent rigid pupil prevented its easy escape. On the fifth day, the corneal section had completely united. A grey membrane, resembling detached retina, was perceptible through the pupil, which was central, immoveable, and lazy. The patient has fair perception of light. A similar case (of a patient aged 19) had been treated by linear extraction: he left the Hospital with a central black pupil nineteen days after the operation. Vision (fair perception of light) was not improved. A grey non-vascular membrane behind the capsule intercepts the light of the ophthalmoscope.

One case of congenital cataract (aged 23), in which both eyes had been repeatedly operated upon elsewhere (eighteen years ago), came under notice. Both globes were oscillating; the right was staphylomatous; the left showed, on dilating the pupil, a flat waxy-looking lens. The patient had perception of colour, and no inflammatory symptoms existed in the eye. The greater part of the lens was removed with a cannula forceps and scoop through a small corneal opening. The right globe was excised. On the eleventh day after the operation the remaining swollen flocculi of lens-substance were removed (under chloroform), and a fortnight later the patient recognised the different fingers.

In one case of double extraction (of July last) the false membrane behind the pupil was opened out with one needle.

EXCISION OF THE GLOBE. Of this operation there were ten cases. Of these, three were for staphylomatous enlargement of the globe. There were four cases of acute inflammation of the globe, in which vision had been destroyed by former inflammatory attacks.

Two cases were free from active inflammatory symptoms in the diseased eyes, which were removed to prevent their compromising the healthy eyes.

In one case there was some congenital disease of the deeper parts of the globe, with loss of vision, and recent inflammation affecting the sound eye.

In several cases the outer canthus was divided to allow the staphylomatous globe to pass through the palpebral aperture. The bleeding (generally inconsiderable) is best stopped by continued application of cold water, keeping the palpebræ open with the speculum; the introduction of lint does not answer as well.

Of the above globes, three are particularly interesting.

One (excised by Mr. Dixon) inflamed during the recovery of the other eye from extraction. Cataract had existed in both, and had been successfully extracted from the right eye. Three weeks after the operation the left eye inflamed; pain, etc., continued for two months, and the globe was removed to save the right eye. Mr. Dixon divided the conjunctiva, the superior, inferior, and internal recti (without using the hook), and the optic nerve. The globe advanced out of the orbit, and the external rectus and remainder of its soft attachments were divided. A quantity of lymph had been deposited throughout the vitreous humour, and by its changes, shrinking, etc., had detached the retina.

In a case of Mr. Poland of excision for melanosis of the globe, the development of the cancerous growth (from the choroid near the yellow spot) was distinctly seen. The melanotic mass consisted of millions of transparent tubes which, commencing in the choroid, branched out and opened into the eye; to the different branches large oval cells were attached. The branches and cells were surrounded by rust-coloured blood-corpuscles, and pigment *débris*. The growth had filled the globe within a week, and had caused effusions of



lymph on the outer surface of the sclerotic beneath the insertion of the oblique muscles, which rendered excision somewhat tedious. Six hours later the contents of the globe formed a smeary chocolate-coloured mass, none of the tubes being recognisable.

In the globe which had been removed for some congenital defect, and pain, etc., by which it compromised the good eye, an irregular shaped dead white mass (the lens) had been visible through the cornea and the dilated pupil, suspended in the transparent ciliary pigment. On opening the globe a fibrous cord was found attached (on the surface of the retina) to the portion round the yellow spot and entrance of the optic nerve, and thence stretching through the vitreous humour, was inserted into the hyaloid fossa, to the anterior surface of which the dead white shrivelled lens was firmly adherent; so that, on dragging it with a needle, the retina was detached to the extent of the insertion of the fibrous cord. The latter enclosed numerous blood-vessels, most of which branched backwards before reaching the hyaloid, and formed the central point of insertion for the transparent strings, which originated from the inner surface of the hyaloid membrane, and by their number appeared to cause the consistence of the vitreous humour.

Total of major operations, 71.

## Original Communications.

### THE NATURE AND CAUSE OF THE PAIN OF PLEURISY AND PERITONITIS.

By THOMAS INMAN, M.D.Lond., Physician to the Northern Hospital, Liverpool.

It is well, every now and then, as we go forward in the career of medical science, to ascertain whether our progress is as real as it seems.

Captain Parry, in his celebrated attempt to reach the North Pole by travelling over the ice, found himself at last in a position when he was constantly toiling onwards, and yet making no advance; for the ice on which he walked was moving towards the south at the same speed as he was going to the north. Medical practitioners resemble him in many respects, in their efforts to reach medical truth. As long as their view is limited, they seem to be making way; but as soon as they take an observation and consult the stars, they see that they have been almost standing still. We ought, therefore, from time to time, to do as he did, and take some bearings by which we can judge of our real progress. This can only be done by endeavouring to ascertain whether the ground we stand upon is really a *terra firma* or a moving bog. For a hundred years, the theories of the "weapon salve" and of "phlogiston" reigned; and men thought they were progressing in knowledge, the better they were able to apply the one and demonstrate the qualities of the other. But no real progress was made in the route followed, for the "weapon salve" was a cheat, and "phlogiston" a fallacy. At last, some self-reliant spirit boldly became a heretic; he became the pioneer of a new track, and that track led him nearer to truth than he was before. Now, what man has done man may do again; and it is as legitimate in us to exercise our reason against what to us appear to be false doctrines, as it was in our forefathers to exercise theirs.

In a previous number of the BRITISH MEDICAL JOURNAL (January 9th, 1858), I ventured to attack the commonly received dogmas respecting those pains to which the generic word "hysteria" had been applied. I now venture to attack another dogma of equally general interest; namely, that inflammations of serous membranes are more painful than inflammations occurring elsewhere. On the previous occasion, I attempted to show that the so-called "hysterical pains" had a purely muscular origin, and might be, under certain circumstances, as distinct in the male as in the female—that they were analogous to those sensations we experience in our own persons after excessive or unusual bodily exertion.

I have also attempted, in a larger work (*Spinal Irritation Explained*), to show that all the voluntary muscles of the body are subject to painful affections of greater or less severity and duration. I propose now to examine whether there are not some other morbid phenomena—the pleuritic stitch, for example—which have hitherto baffled the mental ingenuity of authors, that may be traced distinctly to a similar source.

If we investigate the phenomena of pleurisy, with especial reference to the symptom of *pain*, we are first struck with the undeniable fact that *post mortem* examinations prove the existence of a vast number of pleurisies that have never been suspected during life. We may see before our eyes adhesions of great or small extent; we may even have circumscribed abscess, or complete filling up of the cavity of the pleura with lymph and serum, and the mediastinum pushed over to the other side; or we may see false membranes, as thick as sole leather, covering both the lung and ribs; and even, in some rare instances, a bony concretion of great size enveloped in old adhesions: and yet, to our certain knowledge, the individuals in whom these appearances were found, never had such signs of pleurisy as to call their attention to it; they never had pain in the side, etc. We know, moreover, that amongst the living, there are many cases in which some amount of hurried respiration has been the sole physiological sign of pleurisy, and in which no proof of its presence would exist were it not for those physical signs generally considered as characteristic.

A more extended inquiry supplies us with the equally significant fact, that pericarditis will, like pleurisy, exist without the patient being conscious of any local pain.

We conclude, from these considerations, that the pain of pleurisy does not arise simply because there is inflammation of a serous membrane; that it is not purely due to inflammation, but depends upon something superadded to it. A rapid *coup d'œil* over the phenomena of inflammation elsewhere, proves that the process may go on from the beginning to the end, without any suffering being complained of. We are entitled to assume, therefore, that if pain does exist in cases of inflammation of the pleura, it must depend upon some cause which is not generally in operation in inflammations elsewhere, as of the pericardium, lungs, and liver. The dogma, that inflammation in serous membranes is more painful than in other parts, simply because they are serous, is one which has long occupied the schools, just as the dogma, that "Nature abhorred a vacuum," held them in days gone by; but as the latter, when tested by rigid experience, was found wanting, so the former, when tested by close observation, will also be found to be untenable.

After discarding our old guide, on suspicion of having led us falsely, it becomes necessary for us to find the track to truth ourselves from such landmarks as our observation leads us to recognise. How shall we pursue the route?

I propose to consider—

1. The circumstances under which the pain is complained of, when genuine pleurisy actually is present.
2. Whether similar pains come on under other circumstances, when no pleurisy is present.
3. The means Nature or the patient adopts to relieve the severity of the suffering, when it is present.
4. The means most successful in the hands of the medical practitioner.
5. The deductions necessarily drawn from the foregoing considerations.

1. Whether we refer to printed books, or to the broader page of hospital and other experience, we find that wherever the pain is situated, it is always increased, and sometimes only noticed when the patient takes a deep inspiration, coughs, sneezes, talks much, or moves the body in any way requiring fixation of the chest. Where the suffering is severe, even ordinary respiration is painful, and is effected chiefly by the diaphragm. While the patient is at perfect rest, the pain is commonly absent. It is increased or produced by percussion, especially in the intercostal spaces, the pain, then, being commonly acute and stabbing, and compelling the patient to wince or contract the thorax on that side: broad and steady pressure is borne, and invariably gives relief. The pain complained of is not confined to the thorax; we have it occasionally "in the right hypochondrium, and extending even as far as the flank".

Again, we have pleurisy without any pain at all; and those cases are almost always, if not invariably, unattended with much cough.

It is well known, too, that after pleurisy has gone on once to effusion, and the effusion is sufficiently extensive to reduce the lung to a minimum, without at the same time distending the chest to a maximum, pain is commonly absent, though it may still be produced by direct percussion, or by any motion implying action of the intercostal muscles. If the observation ended here, it would be of little significance; but when we find that the patient has absolutely a return of pain after the effused fluid has been so far absorbed that the lung is again in contact with the ribs (a tolerably good proof that the inflam-