

large number of smaller sacs, one mass, attached in the pelvis by a single pedicle about an inch thick. This was divided, and secured by a clamp with a ligature beneath it; and the sides of the wound were brought together with sutures. The intestines were scarcely seen, and little or no fluid escaped into the peritoneum. The contents of the cysts varied from a straw-coloured, thin, but viscid, fluid, to one of a brown colour and gluey consistence; and some of the fluid sparkled with scales of cholesterine, which exhibited very perfect plates under the microscope. The whole mass, tumour and fluid, weighed two stone.

After the operation, she suffered great pain; but was much relieved by a drachm of tincture of opium; in the evening, fifteen-minim doses were repeated every four hours. Barley-water and tea were also taken, though several times rejected by vomiting; for which soda-water was given.

April 22nd. The patient passed a quiet night. Pulse 93; tongue moist. She had no further sickness; but a rather frequent cough, and an anxious expression. The catheter was passed night and morning. The opiates were continued. At 4 P.M., she was perspiring freely.

April 23rd. She vomited several times in the night; pulse 120; free perspiration; abdomen painful. 6 P.M. She was in great pain; the pulse was falling; the extremities were rather cold; the abdomen was very tympanitic. An assafetida enema was given; and six ounces of brandy were ordered. She died at 11 P.M.

SECTIO CADAVERIS. The stomach and intestines were much distended with flatus; and there was about a quart of bloody serum in the peritoneal cavity. The small intestines were deeply injected; and their folds were agglutinated by recent lymph. The pedicle was quite free from any signs of inflammation. The uterus and left ovary were healthy. There was no other disease.

CASE II. Elizabeth Cherry, aged 39, was admitted into the Infirmary three months ago, for swelling of the legs, when two tumours were found in the abdomen, one on each side, firm, but distinctly elastic, of which she herself was before unconscious. Her health, at that time, was not much affected, though she suffered from occasional pains in the abdomen; and, being unwilling to undergo any operation, she was discharged. After leaving, she became rapidly worse, the abdomen also increasing in size; and three weeks before her last admission, she was tapped on the left side, when three pints of brownish viscid fluid were evacuated. She was unmarried; menstruation ceased six months ago, having been imperfect for a year previously.

June 7th. She was re-admitted, in a very low and emaciated state. Pulse 104, feeble; tongue dry and irritable. The abdomen was much swollen and tense, and its superficial veins were enlarged. It was dull on percussion, except at the upper part; and on the left side, a firm, but distinctly fluctuating tumour, could be felt on pressure. Both legs were slightly œdematous. She was ordered to have fifteen minims of tincture of opium, with the same quantity of chloric ether, every four hours; and to have milk-diet and ten ounces of brandy.

June 9th. She was frequently sick, and much weaker; she could not lie down in the bed. Soda-water was ordered.

June 11th. She was wasting rapidly; took little nourishment, and was almost constantly sick. Ten grains of bicarbonate of potash were added to the draught. The sickness afterwards abated; but she sank and died on the 16th.

SECTIO CADAVERIS. The lungs and heart were healthy. The omentum and intestines were greatly

thickened all over by a white cancerous deposit. On the left side of the pelvis, there was slight local peritonitis over a tumour of about the size of a cocoon; and, on separating the adhesions, the mark of former tapping was visible. The tumour was so adherent, that it was impossible to remove it entire; and, it being torn, a viscid, reddish fluid escaped. The tumour consisted of a sac containing fluid, with a solid mass of cancer at the lower part, adherent everywhere in the pelvis, and growing freely and sprouting out, as it were, into the interior of the sac. The solid portion had in parts the appearance of soft cancer; and, in others, contained abundance of cheesy, yellow, semifluid substance, of a colloid character. The right ovary presented similar disease, but less advanced; consisting of a sac of fluid, into the lower part of which sprouted a cancerous mass, which was adherent in the pelvis, and had more of the medullary character than the other ovary.

OBSERVATIONS. The case of Elizabeth Harris appeared not an unfavourable one for operation, although she was advanced in age, and had been subjected to previous tappings; for her general health was good at the time, and the disease quite free from any suspicion of malignancy. The size and number of the cysts made them rather formidable during the operation; but fortunately they were all attached by a single pedicle. She progressed favourably at first; but peritonitis set in, and quickly terminated the case.

The last case was somewhat suspicious from the beginning, on account of the œdema of the lower extremities, though not sufficiently so to forbid operative measures; but, on re-admission, her health was too seriously affected, and there was every probability of the disease being of a malignant character; so that, though she had requested to be operated on, and had come in for that purpose, it was considered inadvisable to accede to her wishes. After death, the tumours were found to be so extensively adherent, that, if any operation had been begun, it could not have been completed.

Original Communications.

FOREIGN SUBSTANCES WITHIN THE EYEBALL: THE SUBSTANCE OF A LECTURE.

By HAYNES WALTON, F.R.C.S., Surgeon to St. Mary's Hospital, and to the Central London Ophthalmic Hospital.

In these accidents, I reiterate the principles propounded in my last paper respecting the removal of substances from the surface of the eye. It is our duty, whenever practicable, to remove whatever is driven into the eye. When the body has passed out of sight and cannot be very readily felt with a probe, or ascertained to be superficial, the eye must for a time be left to take its chance; as likewise when the body is so small that it is scarcely possible to seize it; or when it is of such a nature as to be likely to be absorbed; or when it is soft, and, though insoluble, cannot be taken out, as gunpowder, or its residue.

As I have mentioned the probe, I must also enjoin a little caution about its abuse. A great deal of harm is often done with it. I never employ it, except I have strong suspicion of the presence of some intruded thing, and always in a light and superficial manner, for every movement of it out of the line of the injured part inflicts damage. Under all circumstances, except in

very practised hands, the patient will have the benefit from dispensing with it.

It is into the anterior chamber of the eye that substances are mostly driven. We have now sufficient evidence that iron, or steel, provided that it be but a mere fragment, will become oxidised and absorbed in the anterior chamber, leaving the eye uninjured. So long as an oxidisable bit of metal, sufficiently small, does not produce symptoms, wait and see the issue. But this does not hold good with copper or brass. These resist the saline action of the aqueous fluid, and should be taken away; and the sooner the better.

There are several examples published, to show the tolerance the eye may exhibit with bodies in this place, for days, weeks, and even years; in one peculiar instance for sixteen years; but as a rule the end is disastrous. Except the very unlikely process of encysting should ensue, the eye will perish. It is not suppuration that usually destroys, but generally subacute inflammatory action; and sometimes the function of sight is lost, with scarcely recognisable objective symptoms.

The length of time that may have elapsed since a foreign body entered the eye, should be no reason against endeavouring to extract it, if its presence be injurious; because at any time, even after the interval of years, intolerance to it may be manifested. Experience and much inquiry have convinced me that, after symptoms of irritation have set in, it is a fallacy fraught with danger to wait till they cease, for an opportunity to operate. The subsidence for the most part never arrives till the eye is destroyed, and the most threatening symptoms will rapidly end when the irritant has been removed. Except then, under very exceptional conditions, we attempt first to subdue any very acute inflammatory action, there should be no delay. But it is no easy matter to do what is required with the least possible injury, and effectively. Attempt upon attempt is often made in vain, and a well tutored hand only can be expected to be successful. It is an undertaking above all others, that needs self-possession, knowledge of operations on the eyeball, and cleverness in manipulation. Chloroform is indispensable. Emergencies will arise, and must be expected, and should be provided for.

The process of encysting, of which I spoke in my last paper, as occasionally happening on the surface of the eye, is still more rare here, in the anterior chamber. Except for very cogent reasons, I should be disposed to leave an encysted body alone. I should not interfere so long as vision was not interrupted, or likely to be damaged by this conservative effort. But a substance so tied down, is not altogether, and for ever, out of reach of harm. Effusion of lymph, or a capsule around it, does not absolutely secure immunity from future disturbance. The cyst may be spontaneously opened, or be broken by violence, or become injurious in itself.

A foreign body may be impacted in the iris, and be apparent, and yet it might be prudent not to interfere. Except it project, and can readily be seized, the difficulty of extraction is very great, and the operation is likely to be injurious; therefore, in general, and in the absence of symptoms, and especially when it is very minute, I should be inclined to wait, as by so doing there is afforded an opportunity for encysting, which is so likely to happen in this position. I suspect that oftentimes, when an operation is imperative, the better plan would be to excise the bit of the iris, rather than what has so often proved a most tedious and fruitless process—that of picking out the fragment, particularly when more or less covered by exudation. Even on this part an encysted body may become loosened, and produce all possible

ill effects. In the *Dublin Quarterly Journal of Medical Science*, 1848, page 210, is recorded an instance of a very minute scale of copper-cap in the iris becoming encysted, and remaining so for eight years; during which time it produced repeated attacks of inflammation of the eyeball, and, ultimately, it exfoliated through the cornea.

When the posterior chamber of the eye has been entered, the same rule must, if possible, be followed. If the lens have lost its transparency, a better search may be made by removing it.

I have not seen anything impacted in the crystalline lens; and I find but few such accidents recorded. I suspect that opacity is the inevitable consequence. According to the position of the body, must it be decided whether it shall be better to attempt the removal of it in the first instance, and the opaque lens afterwards; or to take it away with the lens. Under all circumstances, the removal must be undertaken; for if even no immediate irritation be produced when the lens becomes absorbed, as it surely will, the offending body will fall into the posterior chamber of the eye, and act injuriously.

The records of ophthalmic surgery teach us that, even when the vitreous humour has been penetrated by a bit of metal it can be explored, and the metal removed, and the eye saved. A metallic chip was driven through the eyelid and the sclerótica, near to the cornea. Several days after the injury, and while the ophthalmoscope was being used, at a sudden turn of the eyeball, there started from behind the inner portion of the iris an oblong, black body, which was instantly recognised as a chip of metal. It was entangled in a few thread-like remains of clot, which kept it suspended in the vitreous humour, and allowed it to move freely backwards and forwards. After due deliberation, the operator determined to penetrate the vitreous humour from below, and endeavour to extract the body. Standing behind the patient, who was seated in a chair close by the window, the eyelids being separated with a spring retractor, he fixed the globe of the eye by nipping up a fold of conjunctiva just above the cornea. A Jäger's lance-knife was then thrust in a little distance from the margin of the cornea, and the point directed backwards, to avoid wounding the lens. The knife was now withdrawn, and Assalini's iris-forceps introduced, with which, after one or two unsuccessful attempts, the body was grasped and extracted. It proved to be a part of the edge of a chisel, about one-tenth of an inch long, and weighed a quarter of a grain. In a remark appended to the case, in the *Ophthalmic Hospital Reports*, it is truly said that in such cases there is a certain lucky chance, without which the most skilful manipulations may fail of success. I may add, that such a fortunate result can fall to the lot of but few operators, nor is a parallel case likely to occur. Still, in allied accidents, the circumstances should be studied with a view to similar treatment.

When there is any reason to suppose that the posterior part of the eye retains any extraneous material, and the symptoms are severe, the eyeball ought to be extirpated; for, irrespectively of the likely injurious direct effect of the accident, sympathetic implication of the other eye is imminent.

In the following case of gunshot injury, it was not at all clear whether a shot had entered the eyeball.

A farmer, with one only available eye, was unfortunate enough to be shot by a boy a few yards in front of him. The greater part of the charge went through his hat, but several shots lodged in his scalp, his forehead, and in the eyebrow, and he was blinded. The anterior chamber seemed occupied by blood. The eyeball was very hard and tender to touch. There was no evidence of shot having entered it, yet its

state could not otherwise be accounted for. Vision was quite destroyed. I was consulted by the recommendation of Mr. Marriott, of Kibworth, for the intense pain in the brow, frequently associated with pain in the orbit, and in the eye. Other surgeons had been consulted, and the conclusions arrived at were different from my own, which was to leave the eye alone, and to remove the shot. I extracted all that I could get at—that is, all that I could feel. Some were embedded in the bone. My patient being a very large and a remarkably fat man, they were the more concealed. Every wound healed by the first intention. Considerable relief followed; but pain in the old situations at longer intervals still tormented him; and some months later, when the position of a few more shots could be traced, I removed them with advantage. Once again he came to me, as two that yet annoyed him could be felt, and they were the last. There was no return of pain after I extracted them.

It is a great satisfaction to me that I avoided extirpating the eye, which would have been useless, and must have further spoiled a fine and benevolent countenance; for, notwithstanding the front of the eye is not quite natural, the pupil being closed and the iris discoloured, there is no marked disfigurement.

Introductory Lectures.

MIDDLESEX HOSPITAL.

THE Introductory Address was delivered by Dr. GREENHOW. He said that he should specially adapt his address to the young men who already were, or who were about to become, students of the Middlesex Medical College. He would remind these gentlemen that this day was the commencement of a new era to them all; it was the landmark of their past progress, the starting-point of their future course; and a few practical counsels, that might help to guide them on their course, and to assist their progress, were what he proposed to offer them during the remainder of the time at his disposal. With this purpose, he proposed to consider—1. The object with which they had entered themselves as students of the college; 2. The studies that would be necessary to secure this object; 3. The manner in which they could pursue these studies to the best advantage; 4. The spirit and aims with which they should pursue the calling for which these studies were to qualify them.

With regard to the first point, there could be no question that their object was to qualify themselves for the practice of medicine; and he trusted that their real object was to render themselves useful and competent members of the profession, and that none of them had in view either the partial object of studying merely some one branch of medical knowledge, or the degrading object, as he could not but consider it, of merely securing their diplomas. No excellence was to be attained in any one speciality, unless a broad and solid foundation of general medical knowledge were first laid. But far more strongly he must denounce the indifference to all branches of medical knowledge alike, which led some men to be satisfied with barely passing the examinations of the several boards, whose standard of proficiency was necessarily a low one; for deliberately to place one's self on a low level, and aim at a low standard, was, in his opinion, degrading to any man's self-respect.

He then enumerated the studies necessary to secure their object; and said they must never forget, in the wide and interesting fields of knowledge which these would open to them, that, as intending medical

practitioners, they must study every science with reference to its applicability to the purposes of medicine, including every branch of the healing art. They might master all these sciences perfectly, and even their practical applications to the purposes of medicine, without becoming competent medical practitioners; for medicine was an art, no less than painting or music, and required long practice to attain even moderate proficiency. But medicine differed from every other art, in that it was exercised upon living fellow-creatures, to whom bungling might prove fatal. The tyro in painting or music might spoil the materials or instruments of his art, and yet do no worse harm than that of offending the taste or the ears of his neighbours; but the tyro in medicine might destroy precious lives in his crude experiments upon human subjects, and must therefore be content to learn his art in the first instance by observing the practice of others, and only begin to practise it himself when he could do so with safety to his patients. From the day, therefore, that they entered the lecture-room as students, they should begin also to observe disease and its treatment in the hospital; and, although during the earlier period of their attendance the larger portion of their time should be devoted to the study of science, and during the latter period, on the contrary, to the study of practice, yet from first to last these studies should go on together. Before concluding the consideration of their necessary studies, he must say a few words on the education of their physical faculties. It was not merely by being shown the relation between certain visible signs and certain internal diseases, by being made to listen to the sounds in the chest which indicate certain forms of pulmonary or cardiac disease, or being told to feel the crepitus of a fracture, or the heaving expansive impulse of an aneurism, that they could educate their senses. Instruction came by precept; but education could come only by use.

With reference to the third point—viz., the manner in which they could pursue these studies to the best advantage—it would, perhaps, be more in accordance with custom, if he were to limit himself to general advice. But he had found that general counsels, however good, did not practically save medical students, especially first-year students, from wasting precious opportunities, for want of knowing what those opportunities were, or understanding their true value while the time for profiting by them remained; and he had found also that some students, even up to the conclusion of their attendance, lost the benefit to be derived from prosecuting their studies on a regular and connected plan, from sheer inability at first to form such a plan for themselves, and from drifting in consequence, during their earlier sessions, into indolent and desultory habits. He should, therefore, endeavour to lay before them the details of a scheme for the systematic employment of their time. Dr. Greenhow then explained the distribution of hours which he proposed to first year's students, in order to combine regular attendance on the prescribed courses of lectures on anatomy, physiology, and chemistry, with a diligent study of practical anatomy by dissection, and a share of attention to the study of disease and its treatment, chiefly in the medical and surgical out-patient rooms of the hospital. He was sure that a man of average diligence and ability might profitably attend all the prescribed lectures, and keep up with them in his reading, without being over-burdened with work. He strongly advised the devotion of a larger portion of time to the study of practical anatomy than was now usually given to it by medical students. He recommended that, during their first winter session, their study of disease and its treatment should be carried