the orbit as possible, and you are thus more likely to remove the whole of the inflamed or infected portion of the nerve than in the ordinary operation of enucleation. No doubt we are occasionally obliged to enucleate after neurectomy; the eye you see on the table was enucleated by myself—I now believe unnecessarily—six years after neurotomy from an excessive dread of sympathetic ophthalmia. It has also been alleged that recent researches, especially Poncet's experiments on animals, have tended to discredit this operation, but the contrary is the fact. The only experiments on animals with which I am acquainted are those performed daily by our veterinary friends, and they show conclusively that if a sufficient piece of nerve is removed it never reforms; moreover, it was formerly supposed that the channel of communication between the two eyes in sympathetic ophthalmia was through the medium of the ciliary nerves; that opinion is now exploded, Deutschmann's researches having conclusively shown that it is the optic nerve, its lymphatics, and lymph spaces, which are alone the source of danger, the only bridge by which sympathetic ophthalmia, or ophthalmia migratoria as it ought to be called, can travel from one eye to the other. Speaking on this subject, Professor Schweigger of Berlin remarks, "It is not necessary to remove the exciting eyeball if by exsection of a piece of the optic nerve we can remove the bridge by which the inflammatory process travels from the injured to the non-injured eye"; he adds, that "neurectomy, while as efficient a prophylactic measure as enucleation, has the great advantage that it neither sacrifices the eyeball nor renders an artificial eye necessary." Professor H. Knapp of New York, in a recent paper on exenteration, says, "the mutilation from enucleation is a source of life-long misery and misfortune to many a sufferer in all classes of society." I have myself heard one of our most eminent ophthalmologists remark that "anything is better than a glass eye"; and I know one noble lord who absolutely refuses to wear one. It is for the opponents of neurectomy to explain away these facts and answer these arguments, to prove that we may not in certain cases obtain all the benefits of enucleation by a less severe operation, and one which is not only a *moyen préventif*, but is also unattended by any mutilation whatever; meanwhile, whatever may be the result of further discussion of this important question and extended experience of the operation of neurectomy, I am sure you cannot go wrong in adopting it in such cases as those I have pointed out.

We shall now proceed to operate upon our patients. There are five cases needing attention: one of these is a small boy with neoplastic growth following injury of the eye, which will require extirpation; another is the subject of traumatic cataract, which I propose to extract *secundum artem*—i.e., according to recent enlightenment, without iridectomy; a third is suffering from infecting ulcer of the cornea, which I shall treat after Niden's plan with the electric cautery; and two others, both adult males, who have singularly enough come in to-day, who will afford me an opportunity of showing you the operation of resection which I have just described.

Remarks after operation.—Gentlemen, I need not now detain you with any remarks upon the first three cases you have just seen. With regard to the last two, the elder is sixty years of age. He comes from a large town in Yorkshire, and for three years past has been suffering more or less, and at varying intervals, from the effects of an accident to his right eye, which was cut across the centre by a chip from a boiler which he was mending. I saw him for the first time to-day, and he informed me that he has been in an eye infirmary, and that the surgeon, whose skill is well known, wished to take his eye out, an operation which he declined then, and again when I suggested it to him to-day. He came here, he says, "because he thought I might relieve him without taking his eye out, and if I could not do so he should return as he came." I suggested neurectomy, to which he submitted without a moment's hesitation, and which, as you saw, was performed without misadventure. Now the eye is quite insensible, and I have no doubt that we shall have succeeded in relieving him from pain, annoyance, and attacks of recurrent inflammation, which have again and again prevented him from using the sound eye. The younger patient was injured by the bursting of a gun; his forehead was wounded by a chip of metal, and the right eye has been peppered with powder; he has bare perception of light with this eye; I cannot illuminate the fundus oculi, and the pain he has suffered since the

accident three weeks ago has deprived him of sleep, and, according to his own account, rendered life unbearable. I could not ascertain that the eye had been penetrated by any solid substance, and it was clearly desirable that we should relieve his pain with as little injury as possible. I therefore, as you saw, divided the optic and ciliary nerves. As soon as the effect of the ether had subsided he declared that his pain had quite gone, and I think we have reason to believe that this happy state of things may continue. Should we, however, be disappointed, we always have enucleation in reserve. I may mention that some forms of neuralgia may be relieved by division of the ciliary nerves only, an operation which was first proposed by Von Graefe, and first successfully carried out by Professor Meyer. The operation was then performed by incising the eyeball, but it may be just as well accomplished by division of the nerves behind the globe, by separating the tendon of the internal and external rectus muscle and feeling *à tâtons*, as it were, down to the optic nerve. I have here a little girl from the blind asylum who has been entirely relieved of neuralgia in this way, and two others—adult males—in whom the operation has been equally successful.

I thank you, gentlemen, for your attendance and assistance this evening. The next lecture will, I hope, prove specially interesting to you, as I intend to discourse upon eye diseases as they occur in general practice.

AN OBSCURE CASE OF FEMORAL HERNIA; OPERATION; NECROPSY.

By EDWARD BELLAMY, F.R.C.S.,

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THE patient, S. H.—, a female aged sixty-seven, came under my care on Nov. 5th, 1885, with what was diagnosed as a large left femoral hernia, evidently containing omentum. She had been ruptured, as far as I could ascertain, since 1867, and the hernia had never entirely returned within the abdomen since its first appearance. She had never worn a truss. Owing to bronchitis she had been coughing a great deal of late, and on the morning of the day I first saw her, after a more than usually severe fit, the rupture increased very much in size and gave her intense pain. Although she had been sick after the coughing fits for two months, she had had no pain, which would seem to fix (?) the period of strangulation to the morning of the 5th. The bowels were normally opened on Nov. 3rd, when there was a period of rest for several hours, and the symptoms were very slight, the tongue somewhat furred, pulse 100, and her vomiting *biliary*. At 8 P.M., under ether, an attempt was made at taxis, but resulted in failure. At 9.30 it was again tried and again failed, so I at once proceeded to operate, under strict antiseptic precautions. By a straight incision about four inches long I exposed a loop of intestine seven inches long, nearly black but still glistening, and a mass of omentum as large as my fist, but showing no signs of strangulation, and to which evidently the coil of intestine was attached. After dividing what I supposed were the constrictions, I found I could not reduce the bowel, and believing that my being unable to do so was possibly the adherence of the mass of omentum, after clamping it beyond, I excised it with scissors and tied each bleeding point separately. With a little manipulation I then succeeded in returning—as I thought, and as did those present—the liberated gut into the abdominal cavity.

Nov. 6th.—The patient was sick, but free from pain, and passed a motion. Pulse 120; tongue moist. The wound was dressed under spray, and looked very well.—7th: Again very sick, and some pain in abdomen, but no local tenderness. Pulse 116.—8th: The same. Pulse 130.—9th: The same. The temperature suddenly fell to 96°, and she died somewhat suddenly at midday. I may state that I had made up my mind to perform a second operation, but her condition clearly showed that no good could possibly come of it.

Before making any remarks, it will be advisable to read the post-mortem notes, as made twenty-four hours after death by my friend, Mr. Stanley Boyd:—Body well nourished, rigor mortis moderate. Post-mortem congestion marked.

There is a wound about four inches long, a little below Poupart's ligament at its centre. There is a little greenish discolouration about its upper part. Slight union has occurred between the edges, but is easily broken down. The finger passes into a cavity which surrounds the femoral opening. On opening up the wound, a small piece of intestine, about the size of a pigeon's egg, is found to have descended through the canal and to have become strangulated. It is for the most part a deep purple colour, but its anterior part is yellowish, and may perhaps indicate commencing slough. Its surface is still polished. The saphenous vein runs upwards just internal to this opening. It is full of yellow red thick fluid. This had been clearly brought down again by coughing. The deep crural arch and the external pillar are notched to the depth of one-third of an inch immediately above the ring. Abdomen: The lower part is swollen and occupied by a considerably distended coil of small intestine, exhibiting the signs of early peritonitis. The large intestine and stomach are empty and uninfamed. The liver is driven up. There is very little fluid in the peritoneal cavity. Below, this distended bowel leads to the femoral ring, which it enters. Issuing from the wound is a perfectly collapsed piece of bowel, which occupies the deep part of the abdomen. Tracing the dilated portion upwards, it is found to cross the abdomen from right to left beneath the mesentery of that piece of bowel which is impacted in the femoral opening. This band is moderately tight, and does not seem to have produced any extra strangulation. On the left of it the bowel ends in the duodenum. Dependent parts of bowel are much congested, but no sign of nipping is found in any part of the intestine within the abdomen. On removing the dilated bowel, the omentum and small intestine (the former bringing down with it the transverse colon) are found matted together by adhesions, some of which are recent, but others, especially those binding the omentum to the abdominal wall, seem to be old. The piece of bowel immediately below the opening is of a blackish colour, and adherent by very soft lymph to a thick mass of omentum which is firmly adherent to the left side of the inner opening of the femoral canal. The femoral canal is now laid open from above. On the omentum, after removal from the canal, are found the two ligatures applied during life, so loose that the handle of a scalpel passes beneath them easily. Round about the omentum is a quantity of the same thick red fluid which was found in the saphenous vein. As to the bowel, that portion which lay external to the ring is found to be continuous with a considerably larger portion lying in the cavity between the peritoneum, on the one hand, and the horizontal ramus of the pubic bone with the obturator internus on the other. This cavity contains a little red fluid of offensive smell. The intestine in this cavity is everywhere of a deep purple colour, in many places becoming opaque. The sides of the coil are pretty firmly adherent to each other, and it seems to contain some rather solid masses. The strangulated portion joins the intestine in the abdomen by a strongly constricted neck, which remains well marked even after removal from the body and the removal of all constricting bands. A little force, however, sends gas from the strangulated into the intra-abdominal portion. The intestine contains the usual plum-coloured offensive fluid, with a little faeces. The thick masses are simply greatly swollen portions of bowel wall. Towards the omentum, everywhere the wall looks as if hæmorrhages had taken place into it. At the point of constriction the entering intestine is thin and fibroid, not ulcerated. The piece leaving the hernia shows no sign of nipping upon the mucous membrane. The bowel above is full of fluid faeces. That strangulated, and below the point of strangulation, contains a good deal of mucus in addition to the prune-juice-coloured fluid. It is now found that there is another cavity between the peritoneum and the body of the os pubis, shut off from that above described by a complete membranous septum having somewhat the feel of omentum. Below, it is continuous with the inner wall of the femoral sheath. What the contents of this may have been there is nothing to show. The strangulated piece is about 7 ft. up from the ileo-cæcal valve, and its length is about 6 in.

Remarks.—It seems to me that the case is one of extreme rarity, and that the following are the chief points of interest: the very short duration of the symptoms which called for operation, considering the age of the patient and the time she had suffered from rupture; the unsuspected condition found on the post-mortem examination, of which

there was not the slightest evidence during the kelotomy; the persistence of symptoms after operation, or rather their recurrence, suggesting a second operation, which was about to be performed. From the condition of the parts, it is quite evident that the coils of intestine must, at each reduction on the patient's or medical attendant's part, have been invariably returned into one or other [of the cavities above described. The secondary operation I should have performed would have been a laparotomy. The question is, How far, from what one knew of the case, there is evidence to have justified it being the primary one.

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ON CALCULOUS DISEASE.

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Distribution of Calculus in England, Scotland, and Ireland; Distribution of Allied Diseases—Gout, Rheumatism, and Diabetes; Annual Death-rate; Influence of Rainfall, of Season, of Cyder-drinking, &c.

THE proverbial frequency of calculus in Norfolk has called forth many explanations, none of which can be regarded as satisfactory. It has been attributed to the prevalence of east winds; to the consumption of the Norfolk dumpling, of beer, and of water impregnated with chalk; to the deficiency of milk, and to other causes. The town of King's Lynn is situated on the Great Ouse, and this river sharply limits the distribution of our stone cases. Of the last fifty cases treated at the Lynn Hospital, forty-eight came from the east side of the river and two only from the west. As this circumstance sweeps away the east wind, the dumpling, the beer, and the deficiency of milk theories, only the chalk theory is left. Professor Latham has written a good deal recently upon the formation of uric acid in the body, but neither he nor anyone else has yet explained how chalk in the human laboratory can be converted into uric acid. It happens, unfortunately for the chalk theorists, that those parts of the county of Norfolk in which calculus is most common are not the chalk districts; and, conversely, that the chalk districts, although not absolutely stone-free, produce a much smaller proportion of cases than do the gravelly and sandy districts. Next to Norfolk, as a stone-producing county in the United Kingdom, comes Aberdeenshire, a district from which chalk is absent. In Aberdeenshire the prevalent theory is the consumption of brose. But brose is unknown in Norfolk, and, moreover, is an article of diet not confined to Aberdeenshire; whilst in larger areas in Scotland where brose is consumed the disease is unknown—as, for example, Inverness-shire. With the above facts before us, it is clear that some other explanation exists which has not yet been offered. In the hope of finding the clue to the problem the present investigations were undertaken.

Before advancing any further theories which might or might not stand the test of the geographical distribution of the disease, the present communication will deal firstly with the distribution of the disease in Great Britain. For this purpose we may take the statistics of stone cases of the various county hospitals which have been collected by Dr. Dobson¹ in 1779, Mr. R. Smith² in 1821, and Mr. Cadge³ in 1874. By comparing these we shall find that while no part of England is absolutely free from stone, yet it is much more common in some parts than in others. In the order of frequency are the counties of Norfolk, Suffolk, Huntingdon, Cambridge, Yorkshire, Worcester, Leicester, Nottingham, and Warwick. On the other hand, in the order of rarity are the counties of Hereford, Chester, Devon, Dorset, Derby, Lancashire, Wiltshire, and Cumberland. Unfortunately these statistics are more or less incomplete, no returns being shown from many hospitals. Neither are we able from them to form any trustworthy opinion as to the frequency of the disease to the population. For this purpose we must have recourse to the Registrar-General's reports. Now the great point is, are these reliable?—not from negligence in their compilation; but are the deaths from calculus registered as such really from this and not from allied diseases, such as stricture or enlarged prostate? A good deal of trouble was

¹ On Fixed Air. Chester, 1779.

² Medico-Chirurgical Transactions, vol. xi., p. 7 et. seq.

³ Address in Surgery, THE LANCET, Aug. 15th, 1874, p. 234.