History of Present Illness.—The patient first presented herself for treatment in April, 1900. She was then suffering from a very severe attack of pain in the right hypochondrium, with much vomiting, cold perspiration, and general collapse. Her general condition was unsatisfactory, she was in failing health, she had lost considerably in weight, and there was swelling of the legs and abdomen. The skin was sallow, with a slight tinge of jaundice. Her condition of general debility was steadily getting worse. A physical examination showed the liver to be enlarged, and the gall bladder could be felt as a hard mass well defined, about 2 inches wide and 3 inches long, trending towards the umbilicus. The mass was tender on palpation, and painful after any exertion. In June and July the swelling gradually increased, and the mass extended over a larger area, approaching nearer to the umbilicus. A little later the tumour gave a sensation of fluctuation, and became less definite in outline, but more obvious on inspection. The diagnosis arrived at by Dr. Fry was gall stones, with malignant disease of the gall bladder and surrounding parts. His diagnosis was strengthened by the fact that the patient was steadily losing ground. About the middle of July there seemed to be a sudden and considerable decrease in size of the tumour, with some relief and temporary improvement. Dr. Fry then advised the patient to see Mr. Mayo Robson, with a view to operation.

Anamnesis.—On examination on July 28th, a very distinct tumour could be felt beneath the right costal margin adherent to the parietes, which was thought to be the distended gall bladder acutely inflamed and suppurating. As it could not be said definitely that there was malignant disease operation was advised without delay. Since the stomach was dilated stenosis of the pylorus was thought to be present, due either to adhesions or to independent growth.

Operation.—On August 9th, a vertical incision through the upper part of the right rectus was made down to the gall bladder, and a dense mass of adhesions was at once encountered. An abscess was found in the sheath of the rectus; this was cleared out and purified as far as possible. The gall bladder, which was very much thickened and bound down to the liver, was opened, and some thick purulent discharge escaped, general soiling of the peritoneum being prevented by packing sponges all round the site of operation. A large stone was removed from the gall bladder and another from the cystic duct. A fistula was found between the gall bladder and the pyloric end of the stomach, through which the empyema was discharging itself into the stomach. The pylorus was found much thickened, and was evidently attacked by growth which was also involving the gall bladder and adjoining portion of the liver. A V-shaped portion of the margin of the liver and most of the gall bladder were removed, only a small portion of apparently healthy gall bladder being left. The V-shaped gap in the liver was sewn up with deep sutures of chromicised catgut; the hæmorrhage in the meantime being controlled by sponge pressure. A tube was placed in the cystic duct, and what was left of the gall bladder was sewn firmly round the tube. Attention was now turned to the pylorus. The stomach and duodenum were grasped, while the pylorus was cut away. The peritoneal margins of the openings in the stomach and duodenum were united by a continuous silk suture, and the mucous margins by a continuous chromicised catgut suture, around a bone bobbin which preserved the lumen of the passage. An omental graft was then sewn over the junction to afford additional security. As the disease proved to be malignant, the affected part of the rectus muscle and peritoneum adjoining were excised, and in order to repair the gap a further transverse incision was necessary. The peritoneum, aponeurosis, and muscular wall were then all securely closed. The whole operation was completed within the hour. The patient rallied well, and convalescence was uninterrupted.

Progress.—Bile flowed freely through the tube, which was removed on August 22nd, and then gauze was used as a drain, and bile continued to flow for three weeks after the operation. The faces were of normal appearance, and the icteric tinge soon cleared up. After the first week a small dose of strychnine was given thrice daily up to the time the patient left the home on September 7th. Microscopic section showed the growth to be columnar-celled carcinoma. Two months after operation the patient was progressing favourably and gaining strength. There had been no return of symptoms or any discomfort, and her general health had much improved. There was a very small sinus where the drainage tube had been, but no biliary fistula.

REMARKS.

The case is of interest in several respects: (1) In the association of abscess and cancer both being dependent on the irritation of gall stones; (2) in the occurrence of a fistulous track between the gall bladder and stomach; (3) in showing how difficult it is sometimes to make an exact diagnosis before abdominal section; (4) in demonstrating how the surgeon must be prepared for any contingency when operating for gall stones.

When cancer attacks the gall bladder it is usually secondary to gall stones, and less frequently to extension of cancer from adjoining organs. Extension of the growth from the gall bladder is usually by continuity, the liver as a rule being the first viscus to be attacked. When the growth has begun at the fundus of the gall bladder the colon is frequently attacked, but when the growth arises at the neck of the gall bladder the pylorus and duodenum are more often affected. In this case, however, the fundus of the gall bladder was the site of origin of the disease, and the pylorus was invaded secondarily.

Where the gall bladder becomes attached to any hollow viscus a fistula may form, and fistulae in connection with the bile passages are in fact not uncommon. They result from

operation or disease. If from disease they are due to ulceration resulting from gall stone or cancer. The fistulous channel may either be direct or indirect; the direct variety is caused by an ulcer setting up local peritonitis, with consequent adhesions, which bind the gall bladder or ducts to a neighbouring hollow viscus or to the parietal peritoneum. In the indirect variety the perforation occurs slowly, and an abscess is formed which may burrow into a hollow viscus or out on to the surface of the body at some point. The commonest fistula is between the biliary passages and the abdominal wall, the next in frequency occurs between the gall bladder and the duodenum, the next in order between the biliary passages and the colon. Pathological surface fistulae usually open at the umbilicus, the abscess following the course of the obliterated umbilical vein.

The jaundice in malignant cases, apart from the obstruction produced by stones in the common duct, is caused by extension of the catarrh along the mucous membrane of the bile ducts. The frequent association between gall stones and malignant disease is due probably to the irritation caused by the stones. Zenker found gall stones in 85 per cent. of cases of cancer of the gall bladder. Musser gives the proportion as 69 per cent., and Courvoisier found gall stones in 74 out of 84 cases of primary cancer of the gall bladder. According to Schroeder 14 per cent. of all cases of gall-stone patients suffer from cancer of the biliary passages at some time. Naunyn is of opinion that half the cases of chronic jaundice diagnosed as cholelithiasis are complicated with cancer or are due to cancer alone.

With regard to partial hepatectomy, 5 cases have been recorded by Mr. Mayo Robson, with 4 recoveries. Since this record he has performed 4 more operations of this nature, with 3 recoveries, making 9 in all, with 7 recoveries. In 5 cases there has been complete restoration to health.

In conclusion I wish to thank Dr. Fry for his account of the patient prior to her coming to Leeds.

A CASE OF SARCOMA OF THE BRAIN REMOVED BY OPERATION: SUBSEQUENT OPERATION FOR REMOVAL OF A SECOND TUMOUR: RECOVERY.*

BY
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THE features of interest in this case were the presence of symptoms unmistakably pointing to an intracranial neoplasm, and with one exception being entirely "general" symptoms. The only positive indication for localisation of the growth was an alteration in the percussion note over an area in the parieto-occipital region of the skull, and the recognition of this sign led to the trephine opening being made directly over the tumour. At the first operation a firm rounded growth about 1½ inch in diameter and ½ inch in thickness, and distinctly encapsuled, was easily shelled out. About six weeks later signs of a second tumour in the same region appeared, and another operation resulted in the removal of a very large tumour. This could not be removed as a whole, but was divided into two or three large pieces, which weighed altogether 6½ ounces. No recurrence up to January 30th, 1901, has taken place, the operation has relieved the patient of his symptoms, the hemiplegia which resulted from the last operation has cleared up, the mental condition is nearly normal, but the sight, greatly impaired at the time of operation, has very little improved.

History.—J. A. W., aged 28, a clerk, was first seen with Mr. H. T. Rudge on April 5th, 1900. Although he had never been strong, he had had no bad illness, or suffered particularly from headache; he had never had any discharge from the ears, and had not had syphilis. In January, 1898, he had a severe cold, and afterwards found that on carrying out some gymnastic exercises, to which he was accustomed, he became giddy. His health remained fairly good until July, 1899, when he was seized with intense, agonising pain in the head, especially in the left temple, and in the occipital region; this was almost constant, and prevented sleep. He did not vomit. This headache has continued with more or less inter-

*Read before the Bath and Bristol Branch of the British Medical Association.

mission ever since, being generally worse in the occipital region, left temple, and the left side of the face. Since the end of 1899 his sight had been gradually failing, until by February it was very bad, and was now little more than perception of light. He was occasionally giddy, especially in the morning, so that on getting up he would fall back on the bed. There had been no vomiting. He also complained of pains in the left eye, and in the upper and lower jaw; of constant yawning, which increased the pain in the head; of inability to open his mouth on first waking, so that he could not separate his teeth more widely than would just admit his finger; of some loss of taste, and of anorexia. For a few days he had suffered from nausea and from attacks in which "consciousness for a moment seemed a complete blank," but in which he did not fall down. There was no loss of control over micturition or defecation. He had always been somewhat deaf, but this had not increased lately. He had not lost flesh. The bowels were constipated. He found himself feeble and unsteady in walking. His friends stated that they had noticed a marked mental change in him during the previous months, his memory was bad and steadily deteriorating, and he was slow in comprehending what was said to him.

Anamnesis.—On examination the patient was found to be a tall, thin young man, with feeble musculature. His sight was extremely bad, and he could only just manage to count fingers. He walked fairly well, with a little hesitation from his defective sight, but without ataxic or suspicious of a cerebellar gait. He could walk backwards. His face was symmetrical, his eyes were generally directed rather to the right, and moved well to either side in associated movement, but when the left eye was acting alone there was some paresis of the left external rectus. The pupils were normal in size and equal; they acted well to light, accommodation, pain, and consensually. There was no nystagmus and no anaesthesia of the face, although he complained of subjective loss of feeling on the left side of it. There was no paralysis of the tongue, palate, or larynx, and he swallowed well. Taste and smell were normal. Speech occasionally was a little indistinct, with some blurring of words. There was double optic neuritis, most intense in the left eye, and some general contraction of the visual fields such as the optic neuritis would account for. There was old-standing deafness in the left ear. There was no affection of sensation to touch or pain over the trunk or limbs, and no loss of power in either arm or leg other than general muscular feebleness. The dynamometer gave right hand 35, left 28. There was no wasting or rigidity of muscles. The superficial reflexes were normal, and the knee-jerks equal and active. His pulse was 84, and his temperature normal.

Treatment.—It was thought advisable, in spite of the absence of any probability of syphilis, that potassium iodide, which he had already taken, should be given in large doses. He was for this purpose kept in bed for three weeks, and at the end of that time he was seen again. The only result was some relief from headache; according to his friends he had been in a drowsy state the whole time, and if left alone at once went to sleep. The ophthalmoscope showed a decided increase in the swelling of the discs. Under these circumstances it was recommended that a palliative trephining should be done to relieve pain and if possible preserve some degree of vision, which was being rapidly lost. Accordingly, Dr. R. G. P. Lansdown saw him on May 2nd with Mr. Rudge and myself, when we found the symptoms unchanged except that the headaches had returned with great severity, he was more dull and drowsy, the pupils were dilated, and the pulse 72. It was found for the first time that on carefully percussing the skull over the lower parietal and parieto-occipital regions there was an area about the size of a crownpiece over which the percussion note was decidedly impaired. This area was not tender. It therefore seemed advisable in presence of this symptom to trephine directly over this area, and instead of doing merely a palliative trephining, to make an attempt to reach the tumour. At the same time, we went carefully over the case again in the search for any other sign that could aid in localisation, but this was the only one that afforded any clue to the position of the tumour, although the greater intensity of optic neuritis, and the paresis of the sixth nerve on the left side, might be taken as indicating the left as the side of lesion. The mental symptoms, although decided, were not more pronounced than they often are in cases of large intracranial growths, and were not sufficiently prominent in the history of the case to indicate the frontal lobes as the seat of disease.

Operation.—Accordingly, on May 8th, an incision was made under chloroform of $\frac{5}{8}$ inches in length over the parieto-occipital region, so as to form a flap with the convex border downwards. The centre of the trephine (Horsley's) was applied $\frac{3}{8}$ inches above Reid's base line, and $\frac{1}{8}$ inch behind a line joining the anterior margin of each ear. The trephine opening was enlarged $\frac{1}{8}$ inch in all directions with Hoffmann's bone forceps. The dura mater bulged into the opening and pulsated.

On May 10th the second stage of the operation was accomplished: the flap was turned back, and a crucial incision in the dura exposed a darkened area about $\frac{1}{8}$ inch in diameter in the centre of the opening, surrounded by healthy-looking brain substance. A flat hernia director was carefully inserted round the edge of this area, and a rounded tumour, distinctly encapsulated, measuring $\frac{1}{8}$ inch in long diameter, $\frac{1}{8}$ inch in short, and $\frac{1}{8}$ inch in thickness, was shelled out. The cavity at once filled up with what was taken at the time to be healthy brain substance.

Progress.—The patient recovered very well from this first operation, but we were soon disappointed to find that the removal of the tumour did not result in the relief we had anticipated. The headaches returned and were severe, he had some attacks of nausea and vomiting, his sight did not improve, the optic neuritis remained stationary or was only slightly better, and the mental condition was still dull, heavy, and drowsy, with failure of memory. There was no paralysis after the first operation.

After a few weeks there were indications of a return of the growth at the site of operation, the scalp being pushed forwards and the edges of the wound infiltrated and separated by the tumour. Accordingly another operation was undertaken on July 22nd.

Second Operation.

The flap was raised by the same incision, and new growth was found to be adherent to its under surface. A large tumour protruded through the opening in the skull, and no healthy brain substance was visible. The opening in the bone was quickly enlarged with Hoffmann's bone forceps until healthy brain substance came into view. The relatively dense tumour was easily separated from the surrounding brain substance by a

hernia director suitably curved. The tumour could not be removed without cutting it into three or four pieces, which it was thought better to do than to remove more bone. It weighed 6½ ounces, and was the size of a large orange. Small fragments of brain tissue adhered to several points on the tumour; hæmorrhage was very free, but easily controlled by pressure with sponges. The cavity was largely obliterated before the flap could be sewn down and a drainage tube inserted.

Nature of Tumour.—The tumours were of firm consistence, white in colour, lobulated, not very vascular, and microscopic examination of both growths showed the structure of a spindle-celled sarcoma, with in the second growth a very little myxomatous tissue.

Progress.—After the last operation the patient was extremely weak and in a condition of partial collapse, but by July 23rd had improved in general condition. He did not seem to understand or to be able to follow out what he was asked to do; for example, when requested to put out his tongue he merely opened his mouth. He, seemed, so far as could be made out, to have lost the muscular sense (also common sensation) in his right hand. When asked to shake hands he felt for his right hand with his left, and did not seem to know when he was grasping anything with the right hand; active movements of the right arm were possible, although he could not resist passive movement of the limb. He had difficulty in expressing himself, being unable to finish a sentence, and using wrong words, for example, *tog* for *tongue*, *neck* for *head*.

On July 25th he was better, but his mental condition was still very dull; he answered questions sensibly, but was very slow in doing so, taking some time before he began to reply; there was no paralysis of the facial or oculo-motor muscles, but he could not protrude the tongue. He could see well enough to count fingers with difficulty. There was loss of power with flaccidity of the muscles in the right arm and leg; the movements of the former were weak and somewhat ataxic. Sensation to touch and pain was almost lost, and sense of localisation and muscular sense very defective over the right upper extremity; but elsewhere sensation was normal. The plantar reflexes were exaggerated, the right giving extension and the left flexion of toes. The right knee-jerk was excessive. From July 24th small portions of brain substance began to come away in the dressings. On July 29th the temperature began to rise, and maintained an irregular course until August 15th, when it returned to normal; its average height was 100° , but on August 2nd it reached 102.8° and on August 3rd 103.6° . Coinciding with the elevation of temperature there was a copious discharge of clear cerebro-spinal fluid from July 30th to August 13th, which was most abundant on the days when the temperature was highest, August 2nd and 3rd. On August 15th there was another large escape of fluid, and this was the last. There was never any sign of purulent discharge from first to last. During all this time he was very ill, vomited several times, and was so weak that it hardly seemed possible that he would recover. During the three weeks preceding his departure from the nursing home on August 29th he was extremely restless and irritable, and at times noisy and troublesome; he refused all solid food, living almost entirely on milk. On leaving the home he got out of bed unaided, stood upright, and walked a few steps; after reaching his own home he rapidly improved in general condition, gaining flesh and strength and taking food well.

On October 23rd, 1900, he was seen again with Mr. M. Thomas. He had gained flesh, remained free from headache, except for slight pain in the left temple occasionally, and from vomiting; he was able to sit up, and his mental faculties were said to be very fair. On examination the wound had healed well, the scalp was depressed and pulsated freely over the trephine opening. He understood what was said to him, but sometimes hesitated in answering, due as it seemed to loss of memory for some words; there was certainly amnesia for proper names, perhaps names of all kind, but this was not certain; he articulated well.

He had well-marked right hemianopsia, and also loss of vision in the lower halves of each retina, so that in looking at objects he put his head far back. The optic discs were both atrophic, and the right still not quite clear in its centre. There was no oculo-motor palsy; the pupils acted to light, but sluggishly, and were dilated. He could now move the right arm freely, use the right hand and fingers well, and the grasp was only a little weaker than the left. The muscles were not rigid. The right leg was weak, and he could not support his weight upon it; there was slight rigidity, which was said to be increasing; the muscles of the leg showed slight general wasting, and the calf muscles were a little contracted. There was slight knee and ankle clonus, and Babinsky's sign was present in this leg. In the left leg there was no ankle clonus, and the knee-jerk and plantar reflex were normal. Sensation was normal everywhere except for some defective power of localisation on the right upper extremity, a prick on the extensor surface being referred 2 inches to 3 inches too low, and on the flexor surface about 1 inch too low.

At present (January 30th, 1901) there is no sign of any recurrence of the growth, the opening in the skull has somewhat contracted, and the scalp covering it is deeply depressed. Vision remains as in October. The patient has recovered his mental faculties and the use of his limbs, with the exception of slight weakness in the right knee. The movements of the right arm show a slight want of co-ordination at times. He can, however, walk, and use both the right arm and leg well. There is no apparent loss of sensation, his speech is good, he has now no amnesia or loss of memory for words.

It seems almost certain from the large size of the second tumour, and the fact that the main symptoms, headache and optic neuritis, were not relieved by the removal of the smaller tumour at the first operation, that the second tumour was present at the time of this operation, and was not a recurrent growth. When, however, the first growth was removed, its place seemed to be taken by normal brain. This was recognised by us, as well as by Mr. H. T. Rudge and Mr. Thomas, who assisted at the operation, whereas, when the second growth was removed later, it could easily be distinguished from the brain substance itself. Possibly the second tumour lay more deeply and to one side, and when the first one had been removed the alterations in the pressure relations

enabled it to push aside the brain and come forwards into the gap. At any rate, it shows how in spite of every care a large intracranial tumour may be overlooked, and even when the opening in the skull is a large one.

The other points worthy of remark are the practically complete recovery of the patient, except as to sight, after an operation of the magnitude necessary to remove so large a growth. The recovery of mental power, though not yet quite complete, is also remarkable, and it must be remembered that some loss in this direction may be partly accounted for by the defective vision and previously existing partial deafness, his vision at the time he was first seen having been reduced to little more than perception of light. The history of this case emphasises the importance of recommending palliative trephining in time, before sight is irretrievably damaged by optic neuritis.

The association of a copious discharge of cerebro-spinal fluid, with rise of temperature, and the return to the normal after the cessation of the flow, is of interest.

A few remarks may be made on the alteration in the percussion-note on the skull over the tumour. As in this case there was no thinning of the bone, to which the alteration in the skull percussion note in intracranial tumours has been attributed, it is probably to be accounted for by the superficial position, large size, and great density of the growth. There were two symptoms which aided in the diagnosis as to the side of the brain which was affected, namely, distinctly greater intensity of optic neuritis and paresis of the external rectus muscle on the left side; the last symptom being only taken to indicate increased pressure on that side, and not of further value in localisation.

The existence of the dull area on the skull was due to the position of the tumour. This alteration in the percussion note, though often present in cases of brain tumour, and frequently associated with tenderness over the same area, is not pathognomonic; it is most marked in superficial tumours, and is often absent in those more deeply situated, or in those such as glioma, where the consistence of the growth is nearly that of the brain. It is generally held to be a symptom of corroborative value if the other signs available for localisation in any given case point to the same position for the tumour.¹ In this case there were no other localising symptoms, but it seemed worth while to use this one as a possible guide to the seat of the growth, and by what must be regarded as a piece of great good fortune it led us directly to it. It is reasonable to hope that as at the end of seven months there has been no recurrence, the patient may remain free from any return of the tumour.

REFERENCE.

¹ For a discussion of this question, see Bruns's *Die Geschwulste des Nervensystems*, pp. 88, et seq.

CASE OF CAVERNOUS ANGIOMA OF THE ORBIT.*

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CAVERNOUS angiomata of the orbit are sufficiently rare to justify the reporting of individual cases; moreover, the one now recorded presents special features of interest.

On July 11th, 1900, I saw in consultation with Dr. Wear, Mr. R. N., aged 51, a man of medium height, average build, and in good general health.

Anamnesis.—His right eye was pushed forwards by a rounded elastic tumour lying apparently behind the eyeball, and filling the outer and upper portions of the orbit. The proptosis was so extreme that the lids could not be completely closed, and ulceration of the lower portion of the cornea from exposure had already set in. The pupil was dilated, and the movements of the eyeball were almost lost. On separating the lids the tumour could be seen through the conjunctiva above the globe as a bluish-black, lobulated swelling. No pulsation could be felt, the tumour was not compressible, and there was no variation in size either spontaneously or by interference with the circulation. The growth did not seem to be intimately attached to the walls of the orbit. Vision was 4/6, and the fundus appeared healthy, the physiological cup being very deep.

History.—The history was that of gradually-increasing prominence of the right eye, first noticed about ten years previously, no pain or particular discomfort being experienced until fourteen days before being seen, when the eye became painful, probably from the corneal ulceration which then occurred.

Operation.—On July 14th, the patient being under ether, I divided the

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external canthus to the margin of the orbit and the conjunctiva to the margin of the cornea. Tenon's capsule was dissected up and the external rectus raised and divided, a suture being attached to each end. The tumour was then exposed and with some little difficulty removed *en masse* without any injury to the eyeball, although the posterior portion of the growth almost encircled the optic nerve. There was very little hæmorrhage; pressure forceps were placed on several vessels, but it was not necessary to apply any ligatures, the bleeding not being renewed when the clips were removed. The divided ends of the external rectus were united by two silk sutures, and the incision in the conjunctiva and external canthus closed.

Progress.—The patient made an uneventful recovery, his vision rapidly improved, and is now 4/6, and there is almost complete range of movement of the eye in all directions. The pupil is still somewhat dilated and accommodation is very feeble on that side, probably from interference with the lenticular ganglion.

Description of Tumour.—The tumour measured 5.4 cm. antero-posteriorly and 3.7 cm. in its greatest diameter; it consisted of three main lobes, the largest about the size of a walnut, and the smallest as big as a hazel-nut. Each was covered by a thin fibrous capsule, and was composed of a fine network of connective tissue, varying in quantity in different portions of the tumour, enclosing small alveolar spaces lined by flat endothelial cells and containing masses of red blood corpuscles. The growth is clearly a cavernous angioma of the fibrous variety.

Simple angiomata connected with dilated vessels in the lids or neighbouring parts are easily recognised, but until von Graefe in 1863¹ described a case of cavernous angioma, the actual existence in the orbit of this variety had been seriously questioned. Neese² has recorded one case and collected a list of nearly 50 cases, and attempted to classify the symptoms. One of the most characteristic signs is the absence of pain. In only 2 cases was pain complained of, and in my case it was due to the corneal ulceration. The slowness of growth is also a very important sign; in one case the growth had been known to exist for nineteen years, and in the present case the prominence of the eyeball had been noticed for at least ten years. The mobility of the eye is usually preserved, but in this case it was almost lost from the unusual size of the growth. In most cases the tumour is elastic and compressible, and tends to vary in size. In my case the growth was certainly elastic, but moderately firm, incompressible, and did not vary in size. In these points it resembles Neese's case and also a case recorded by Knapp.³ In both there was a predominance of fibrous tissue which Neese remarks has not been recorded in any other case. In most cases the growth is not adherent to the orbital walls. Lastly, the general health is unaffected. Five cases are mentioned by Neese in which the eyeball was preserved, but there is no information with regard to the vision of the eye.

My case is unusual in the size of the growth, the amount of fibrous tissue present, and the preservation of the eye, with practically no deformity, and with restoration of almost normal vision.

REFERENCES.

¹ *Archiv für Ophthalm.*, vii, 2. ² *Ibid.*, xxix, 1. ³ *Archiv für Augenheilk.*, xxxii, 4.

THE SALINE TREATMENT OF DYSENTERY:

BASED ON 855 CASES WITH 9 DEATHS.

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IN THE BRITISH MEDICAL JOURNAL for February 10th, 1900, I published a note on the results of the treatment of dysentery by salines, based on 555 cases, with only 6 deaths. The present note deals with the results of 300 more cases which have been treated with salines in my hospital during the year 1900 with only 3 deaths, making a total of 855 cases with 9 deaths, or a mortality of only a little over 1 per cent.

Relapses in Dysentery.

In 453 cases noted last year it was shown that there were 69 relapses, or 1 in 6.5; this year the results are slightly better, there having been only 51 relapses out of 300 cases. Of the 300 cases 1 case relapsed four times, 13 cases relapsed twice, and 37 cases had only a single relapse, total 51. Of the 37 single relapses 8 followed within a month of being discharged from hospital, 9 in from one to two months, 8 in from two to four months, 3 from four to six months, 5 from six to twelve months, and 4 at intervals over one year (one being after four years, and one after two years; these can hardly be called "relapses").