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 $\frac{1}{60}$, 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

Read before the Yorkshire Branch of the British Medical Association.

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 $\frac{1}{60}$, 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").

These results are even better than those published last year, and may be taken to represent pretty accurately the actual permanent recoveries, as they have been continuously under observation, with the exception of about 20 who were discharged from gaol under six months from the date of the last attack.

Seasonal Prevalence of Dysentery.

The monthly distribution of these cases was as follows:

January ...	17 cases.	July ...	36 cases.
February ...	4 "	August ...	67 "
March ...	18 "	September ...	69 "
April ...	13 "	October ...	30 "
May ...	10 "	November ...	14 "
June ...	5 "	December ...	17 "
Total ...		300	

These figures, as well as those published last year, show the seasonal prevalence of the disease—namely, in the rainy season, from the end of June till late in October.

The period of their stay in hospital this year averaged eleven days, as compared with ten days in those previously reported. Many might have been discharged earlier, but a stay of several days in hospital, after the stools have become normal, and full diet has been allowed is, I consider, a most important point to be attended to in the prevention of relapses.

Of the 3 fatal cases in this series 2 were extremely acute cases in which meat-washings stools were constantly passed, and a condition of acute gangrenous inflammation of the colon rapidly supervened. The third fatal case, after the salines had failed, made a wonderful rally after a large dose of ipecacuanha (30 grs.), but died some seven weeks later with symptoms of chronic diarrhoea. At the necropsy the small intestine was found thin and atrophied, and the large intestine was a mass of chronic inflammation from the cæcum to the rectum. He was a feeble old and toothless man, aged 55.

Method of Using the Salines.

There is little to add to the remarks made last year. I used throughout the year the following mixture: R Sodii sulphatis 3j; aquæ fœniculi ad 3j. This was given four, six, or eight times a day (each dose represented one drachm of the saline) as the case required. No dose was repeated on the following day till the stool had been inspected. The saline was continued till every trace of blood and mucus had disappeared. In most cases the inflammatory products had disappeared completely in two or three days; in others they returned on the third or fourth day, necessitating a repetition of the saline.

In a note on the saline treatment of dysentery, published during the past year in the BRITISH MEDICAL JOURNAL, one writer from the South African war hospitals referred to the saline method as being "painful;" in my experience it is rather the tenesmus, etc., which is rapidly relieved by the salines, which is "painful;" the soft yellow stools passed after the use of the soda sulphate cause no pain.

The Limitations of the Saline Treatment.

A word or two is necessary on the limitations of this method of treating dysentery. It is advocated for acute cases only. I do not consider it a safe method for chronic or relapsing cases with ulceration of the colon. In cases in which either the symptoms or the history point to the disease being either chronic or relapsing, I only use the saline for one or two doses during an exacerbation of the chronic state, and then continue to treat the case with soda and bismuth or with salol, with an occasional dose of castor oil. For stools containing scybala nothing is so good as a dose of castor oil guarded by 10 minims of laudanum.

The saline treatment of dysentery is now very largely used in Indian hospitals, and I would impress upon all who wish to try it that unless they can arrange to see the stools daily (at least one morning stool), they can never use the method to its best advantage.¹

When the patient can be admitted to hospital I believe the saline is the best method of treating acute dysentery, but I would hesitate to apply it in a routine fashion in out-patient practice, on account of the possibility of many patients having had previous attacks, and having their bowels in a state of unhealed ulceration.

From what I have read of the use of this drug in the dysentery of the South African campaign, I am not sure

that it was not often given in relapsing cases, and when chronic ulceration was present. It is not (except in the limited way noted above) intended for such cases. The success which has this year attended our treatment of the chronic cases is, I believe, due to careful dieting on rice water (*mar*), and boiled milk and tyre (*dahi*), the use of anthelmintics (a large proportion of the inhabitants of this part of Bengal harbour both round and tape worms), and the careful occasional use of the saline, with Dover's powder and the intestinal antiseptics. There is no royal road to the cure of chronic dysentery. I also have freely used fresh bael fruit, especially for the chronic cases. This fruit is now again official, but I doubt if the inclusion of its preparations in the Indian and Colonial *Addendum* to the *British Pharmacopœia* will be of much use, as the fresh fruit is available in India almost all the year. It is perhaps worth noting that not a single case of liver abscess was found among the 885 cases here referred to.

Mortality of Dysentery.

As regards the mortality of dysentery, the figures quoted in all recent textbooks are somewhat misleading. The death-rate for natives from dysentery is given usually at from 30 to 37 per cent. These figures are based upon cases admitted in an advanced state into public hospitals, many of them having previously suffered from the disease. In the past few years over 60,000 cases of dysentery have been treated in all the gaols of India with a mortality of only 7 per cent., which is the same ratio as given by Scheube for the dysentery of the Further East. The very favourable rate of just over 1 per cent. for the above 855 cases represents the saline treatment of cases of acute dysentery promptly and immediately treated as indoor patients in a hospital.

NOTE.

¹ The stools of all chronic cases should be frequently "washed," after the method long in use in India (and recently described by Professor Kenneth McLeod in the *Edinburgh Medical Journal*, April, 1900). In this way alone can an accurate knowledge be got of the actual state of the bowel inflammation.

THE RESISTANCE OF THE LARVAL MOSQUITO TO COLD,

NOTES ON THE HABITS AND LIFE-HISTORY OF MOSQUITOS IN ABERDEENSHIRE.

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DURING a period extending from the commencement of August last year to the present time favourable opportunities presented themselves for observing the habits and life-history of mosquitos in Aberdeenshire. Certain of the facts that came under notice appear to be of sufficient interest to merit being placed on record. The observations were made on the mosquitos included in the following list:—

A. *Anopheles*. (1) *A. maculipennis* (*claviger*); (2) *A. bifurcatus*; (3) *A. nigripes*—a few insects closely resembling the *A. bifurcatus*, but of a smaller size, were taken by me to be representatives of this species.

B. *Culex*. (4) *Culex annulatus*; (5) *C. pipiens*; (6) *C. nemorosus*. All these species were obtained on Deeside, especially at Torphins. Within the limits of the City of Aberdeen two species of *Culex*—*pipiens* and *annulatus*—were caught. From the middle of August to the middle of October mosquitos were plentiful. They proved to be as ready and persistent as those in the tropics to attack man. The *A. bifurcatus* and *C. nemorosus* were most troublesome in this respect. Repeated attempts were made with the *C. annulatus*, but they could not be induced to bite, although confined under a glass over any part of the human body. The favourite feeding time of the mosquitos was late in the evening, but the *Culex nemorosus* was ready to attack at any time of the day, even in bright sunlight. The *C. pipiens* and *A. bifurcatus* would occasionally start blood-sucking on dull days in shady places in the woods. All the specimens of *A. maculipennis* obtained were bred from larvæ. It was remarkable that, though plentifully got in this manner, I did not catch any of the adult insects of this species on the wing. Major Giles, in his *Handbook of Gnats*, mentions that in England it is only in hot weather that mosquitos show any strong tendency to