CHRONIC HEADACHE AND PAIN IN THE EYES RELIEVED BY A NASAL OPERATION.

BY

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ALTHOUGH there is nothing new in the relief of pain by a nasal operation, the three following cases are reported because the indications for the operation were so indefinite, and the diagnosis so obscure, that the three patients had sought medical relief, many times, in vain.

CASE I.

An unmarried woman, a teacher, aged 32, had suffered from frontal headache for ten years, and from pain behind the left eye and along the nose to the tip for one year. In addition, she had often been off work for general debility. On several occasions a "tired heart" had been diagnosed, and she was particularly troubled by the alteration in her mental condition. She sometimes, for example, felt unable to reply to a tradesman calling at the door, could not concentrate, or had a "sense of fear." She left town for the country, and finally for New Zealand, on account of the "troublesome pressure" in her head, and had returned on holiday when I saw her. There was nothing in the eyes to account for the pain. Glasses had failed on three occasions to relieve her, and there was no muscular imbalance. There were, however, two clues—the patient's past history and the fields of vision.

1. *The Past History.*—She had had post-nasal catarrh, certainly since the age of 14, and probably four years earlier, when she had measles. As a child she always had colds in the head, had suffered from frontal headaches and "muddled head," and was seldom clear-headed. At 19 she was using fifty handkerchiefs a week. At 22 part of the left middle turbinate was removed, and this reduced the catarrh, so that she afterwards only soaked two handkerchiefs before breakfast, the discharge coming mostly from the left side of the nose. But the operation was followed by the frontal headache, from which she continued to suffer for ten years.

2. *The Fields.*—Both blind spots were slightly enlarged, and the left had a large relative extension outwards. The fields were contracted, especially the left.

These two clues led to a diagnosis of sinusitis as the cause of the pain in the head and eyes, the post-nasal catarrh, and the field changes. To confirm this diagnosis the sinuses were x-rayed, but with a negative result. An aural examination showed left ethmoiditis, but operation was not advised. Local treatment was ordered and followed for some weeks, but, as the pain continued, the patient pressed for further advice, and a second aural surgeon found septic tonsils and a high septal deviation to the right. There was no pus. A second x-ray examination was also negative, though the aural surgeon thought there was a slight dullness of the left ethmoid.

The tonsils were enucleated and a partial submucous resection was performed. Before leaving the nursing home the patient wrote: "That miserable pressure has been entirely removed, and my head is as clear as day and my eyes are splendid." A month later she was still free from pain; she said that her mental condition had been entirely normal since the operation, and that the catarrh had practically ceased. Her blind spots were normal, the relative scotoma about the left blind spot had disappeared, and the fields were almost full. Eleven months later she wrote from New Zealand that she was "much better in every way and improving all the time."

CASE II.

An unmarried woman, a nurse, aged 52, had suffered for eleven years from left frontal headache, with vomiting, and from pain at the back of the left eye for four years. During the last two years the left eye had ached almost incessantly. In addition, she was constantly tired, and felt her mental powers so diminished that she finally decided to give up her post.

There was nothing in the eyes to explain the pain. Glasses had failed several times to relieve her, and there was no muscular imbalance. The clues were extremely few and vague. No symptoms at all of nasal disease could be elicited.

1. *The Past History.*—At the age of 13 there had been a seven months' illness, commencing with measles and pneumonia and ending with "typhoid," in which the eyes and nose had been "very bad." Since then her life had been a long succession of septic infections—continual dental abscesses from the age of 14 to 26, carbuncles at 27, colitis at 36, inflammatory tumour removed from the left breast at 39, gangrenous appendix removed at 45, central choroido-retinitis first noted at 45, colitis again at 48, carbuncles again at 50. This history suggested the possibility of sinusitis, commencing at 13 and continuing as a septic focus, giving no evidence of its existence except in the secondary infections which arose from it.

2. *The Fields.*—Both fields were contracted bitemporally. The left blind spot was enlarged, with considerable relative extension. The right blind spot was normal, with slight relative extension.

On these grounds a tentative diagnosis of sinusitis was made. A first aural and x-ray examination proved negative. Later on, a second x-ray examination was also negative, but Mr. Gill-Carey, who kindly examined her for me, found high septal deviation to the left and tenderness of the floor of the left frontal sinus. There was no evidence of pus, and an operation was not advised.

On x-ray evidence all the teeth were then extracted, and two months' rest taken afterwards in the country. At the end of this time the pain was worse, and the aural surgeon agreed that operation was advisable. A portion of the anterior end of the middle turbinate was removed. Nine days later the pain had entirely gone from the left eye and she was practically free from headache. Two months later there had been two headaches, but no eye pain, and the head had been "marvellously better." Vision was misty at times, and this, with the incomplete freedom from headaches, led Mr. Gill-Carey to suggest the removal of a further piece of turbinate. This was done, and at the same time, in view of the long septic history, the tonsils were enucleated. Two months later there had been only one headache, after a cold. The fields had widened to some extent, especially the right.

Obviously the cause of the headache had been reached, though the result seemed less complete than in the other two cases, in which a resection of the septum was performed.

The sinuses in this case were punctured, washed out, and the washings cultured. The right sphenoid was sterile, but from both ethmoids were recovered *Streptococcus longus* and *Staphylococcus albus*, and the left sphenoid gave a growth of *Staphylococcus albus*. Culture from the tonsils produced a bacillus of the Friedländer type and *Streptococcus longus*.

CASE III.

An unmarried woman, a nurse, aged 44, had suffered from vertical headache and aching of the eyes for three years. The headache had begun quite suddenly, without apparent cause. She had consulted two other oculists, each on two occasions, without relief. In addition, she was "frightfully tired," "hopelessly depressed," and could not rely on her mental powers—for example, when playing bridge there would be intervals when her mind was a blank, so that she could not continue the game.

There was no cause in the eyes for the pain. Glasses had failed many times to relieve her, and there was no muscular imbalance. Again there were two clues—one in the past history and the other in the fields of vision.

1. *The Past History.*—(a) She had suffered from post-nasal catarrh all her life. In infancy there had been two severe illnesses, of which no details were available. Possibly the catarrh originated in one of these. (b) Eleven years previously she had had a septic throat, for which she had been off duty for six weeks. Before this she had considered herself a healthy woman, after this she was never really well, and at the age of 41, eight years after the throat infection, her health was so impaired that she was obliged to give up work.

2. *The Fields.*—Both were markedly contracted for small objects, and the right blind spot was decidedly enlarged.

These clues led to the following interpretation of the case. In infancy some illness had started a sinusitis, of which at first the only evidence was post-nasal catarrh, although the rheumatism and bad teeth, from which she had suffered from her earliest recollections, were probably secondary infections from the focus in the sinus. The general health was not further affected, because drainage was free. At the age of 33 the septic throat caused an exacerbation of the sinusitis and increased the block to drainage, so that septic absorption increased, with consequent ill health. At 41 a further inflammatory increase of the block to drainage closed the sinuses still more, leading to tension within them, and thus to headache and pain round the eyes.

Radiological examination proved negative, but a high septal deviation to the right was found, with compensatory left middle turbinate enlargement, and chronic inflammatory changes in the left nasopharynx. There was no evidence of pus. Mr. Gill-Carey resected the septum on December 1st, 1927. Some nasal discharge followed, but by December 26th this had ceased. There has been no pain in the head or eyes now for three months. The fields taken on January 24th, 1928, show a practically full field, even for small objects (1/2000 white). The right blind spot (20/2000) is about the same, but the increase for a 1/2000 white object is only slight.

The patient's mental condition is normal. She can play bridge with zest, is only occasionally depressed, and is able to take a keen interest in life generally.

Comment.

The following comments mainly refer to rhinological matters, but in the study of these cases on the border-line between two specialties it has been necessary often to step over the border. However, Mr. Gill-Carey has discussed and agrees with the conclusions reached.

Diagnosis.—In cases such as these, which are by no means uncommon, the indications of the actual lesion are often extremely indefinite. The best clue is generally to be found in the past history. The fields may be of increasing help when further experience has been gained in this type of case. Culture of sinus washings may also give considerable assistance with further experience of this method. Radiological examination is sometimes of value, but a negative x-ray report does not exclude sinusitis. The absence of pus in the nose (as in all three cases), and even the entire absence of nasal symptoms (as in one case), must not exclude a diagnosis of sinusitis.

Etiology.—In the three cases the sinusitis probably started in early childhood with some illness—for example, measles—and had continued more or less latent, causing profound debility and various septic conditions, which

increased as life went on, during 22, 39, and 42 years, inducing a stage of acute misery.

All the patients had a high septal deviation, which was probably the reason why the sinusitis originally failed to resolve.

Cure.—The removal of a piece of bone from the nose, followed in a few days by complete relief of symptoms, is a dramatic ending to these long-drawn-out histories of pain and disease, accompanied by so much disability and acute mental anxiety. The possibility of so simple a cure makes it very desirable to devise means whereby an earlier diagnosis may prevent rather than cure such misery.

Prevention.—Childhood's diseases—for example, measles, scarlet fever, diphtheria, and whooping-cough—in which there is commonly acute nasal inflammation, are apt to leave behind them a chronic infection of the sinuses, of which there may be local evidence in "constant colds" and post-nasal catarrh, or the child may show only a general debility, with few or no symptoms of nasal infection. There may, however, be evidence of septic absorption or retention—for example, constant sties, spots on the skin, headaches, rheumatism, and bad teeth; this latent sinusitis may continue to be pathological throughout the rest of life. The main method of prevention, therefore, will be the adequate treatment of these childish diseases and their after-effects.

Since it is probable that, had there been no septal deviation, the sinusitis would have healed in the ordinary course, the persistence of symptoms of sinusitis in a child, in spite of the removal of soft tissues—for example, tonsils and adenoids—suggests a bony obstruction to drainage, the removal of which, unless contraindicated, would save much present and future suffering.

Post-nasal catarrh, even when it has continued so long that the patient has become resigned to it and considers it of no significance, remains nevertheless a constant potential danger.

These cases are not primarily ophthalmic, yet patients and their doctors naturally seek first the help of ophthalmic surgeons, as all of these did, and must rely on them to distinguish these cases from those due to refractive or muscle error.

With such indefinite radiological and clinical signs the rhinologist hesitates to operate, and looks to the ophthalmologist to strengthen his hands. It may be that, with further experience, the fields will enable us, in certain cases, to give a decided opinion.

AN UNUSUAL CASE OF FOOD POISONING.

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THE causation of attacks of food poisoning has for many years been a thing of mystery to the average practitioner, and even for the expert there are many points in the epidemiology and bacteriology of the condition which are still far from clear.

The proof that the infective organism in the case here recorded was *B. aertrycke* was entirely due to the pathological findings, for the clinical aspect was distinctly equivocal. In view of this and the sporadic nature of the case, we felt justified in recording it. The history of the illness is as follows:

A married woman, aged 24, was first seen on September 19th, 1927, and gave a history of having had a rise of temperature (99° to 101° F.) at night for the previous three nights, with a subnormal temperature each morning. She had been going out each day, but complained of epigastric pain and occasional vomiting. There was a history of a fall on the back of the head four days previously, but without loss of consciousness or immediate subsequent vomiting.

When first seen her chief complaint was of severe occipital headache and of "rheumatic" pains in various parts of the body, especially in the back of the neck on the left side. There was creaking in the left temporo-mandibular joint and she

complained of fleeting pains in the hips on movement. There was no diarrhoea and the bowels were acting normally; the appearance of the motions was normal. There was marked hyperaesthesia over the epigastrium, and also, to a less extent, over each renal region. Even the slightest pressure over the epigastrium caused a feeling of nausea; the tongue was clean.

She was given salicylates and aspirin without marked improvement, the temperature still rising at night (101° to 102° F.) and being subnormal in the morning. The possibility of pyelitis was considered, but the urine was acid, contained no albumin, and microscopic examination showed nothing abnormal.

On September 22nd she complained of nausea and occasional vomiting, which latter rapidly became more persistent and uncontrollable, with increasing epigastric pain, especially after swallowing. There was marked tenderness on palpation over the spleen, but at this stage the spleen itself could not be felt.

On September 28th she was seen in consultation with Dr. T. L. Hardy of Birmingham, and the case was regarded as clinically suggesting paratyphoid fever. The long axis of splenic dullness was slightly increased and the spleen was just palpable. The white blood corpuscles were 5,800 in number, and a differential count showed polymorphs 29.5 per cent., lymphocytes 59.5 per cent., mononuclears 10 per cent., eosinophils 1 per cent. A serological investigation at the county laboratory on this date revealed the presence of 1 in 25 agglutinability to *B. aertrycke* Mutton, and complete absence of agglutinins to *B. typhosus*, to *B. paratyphosus* A, B, and C, to *B. enteritidis* Gaertner, *B. aertrycke* Newport, and to the dysentery group.

On September 29th, as a result of the blood examination, the patient was closely questioned as to any article of food she had had which might have caused food poisoning, although previously no suspicion of this had been entertained. The fact was elicited that four days before the onset of the illness she had partaken of some pork pie, and that three other members of the household who had also partaken had suffered from slight malaise, nausea, and vomiting from one to three days after this meal.

The patient's vomiting gradually became less distressing and was eventually controlled by minim doses of tincture of iodine and by glucose by the mouth. Two days later she developed a follicular tonsillitis, but this quickly cleared up with ordinary remedies.

A further sample of blood was taken on October 3rd and gave a similar result to the previous one; a blood culture proved negative. By this time an organism had been isolated from the faeces which gave the cultural reactions of a member of the Salmonella group. It displayed marked flocculation in a dilution of 1 in 25 with *aertrycke* serum (Mutton type) in less than two hours' incubation in the water bath at 56° C., but showed no agglutination with paratyphoid serum after four hours' incubation and standing all night at room temperature. The specific serums for Gaertner's bacillus and for *B. aertrycke* (Newport type) failed to cause any agglutination. When tested against the patient's serum marked flocculation was produced in a dilution of 1 in 25, and granulation was evident in 1 in 50. Highly specific standardized cultures and serums were used throughout, and the diagnosis was fortunately simplified by the absence of confusing coagglutinins, both in the investigations on the patient's serum and in those necessary to establish the identity of the micro-organism.

The interesting and unusual points of this case appear to be: (1) A food poisoning which spent itself upon the upper intestinal tract without giving rise to any diarrhoea or signs of enteritis. (2) The slightly enlarged spleen, which, together with the pyrexia and the blood picture, gave rise to a suspicion of paratyphoid infection. (3) The nocturnal rise of temperature—on one occasion it was as high as 103° F.—which is a very unusual feature of food poisoning cases.

So far as could be ascertained there are few cases on record which bear much resemblance to the case described. In the majority of recorded cases the onset has been acute, with diarrhoea and vomiting, and has therefore at once led to the suspicion of food poisoning. A search of the literature, however, brings several interesting points to light.

Drs. Perry and Tidy¹ report on an epidemic caused by the Newport strain of *B. aertrycke* occurring in a depot in France. These authors describe two clinical types: Type A, characterized by high temperature, general malaise, various pains, but no diarrhoea; Type B, characterized by diarrhoea and vomiting and a normal or slightly subnormal temperature.

It is interesting to note that in Type A the stools from nearly a hundred cases were examined, but in one case only was a bacillus found resembling *B. aertrycke*. The authors therefore concluded that this group was not connected with an infection due to *B. aertrycke*, and was, in fact, an entirely separate epidemic. Nevertheless, it is tempting to suggest that the case above described might quite easily have been classed in Type A, but in no circumstances could it have been classed in Type B.

In Type B the onset was sudden, with abdominal pain