the myopia is extreme, above -15 D., as I find that the effort to see distinctly with an undercorrection strains the eyes far more than when the full correction is given. I have never found any reason to alter my practice when sufficient care is taken to avoid the action of the superior oblique muscle.

I may as well now give general directions for the treatment of other forms of ametropia.

Hypermetropia.—Should the spectacles be worn constantly or only for near work? In the absence of squint, and when the vision is 6/6 without any symptoms of headache or eyestrain when viewing objects at a distance, do not insist on the glasses being worn constantly. With an error of $+3$ D. or more they should be ordered to be worn at school and for all close work. But if the error be only about $+1$ D. or $+1\frac{1}{2}$ D. do not order them. What is the use of ordering $+1$ D. glasses to children who have about 15 dioptries of accommodation to compensate for such slight errors? However, remember that in a case of internal squint the correction if over $+1\frac{1}{2}$ D. must be worn constantly.

Astigmatism.—The whole of the astigmatism found by retinoscopy under homatropine should be corrected by appropriate cylinders, and if there are any symptoms whatever, whether defect of sight or headache or eyestrain, they should be worn constantly. If the astigmatism be oblique the correction is almost certain to be uncomfortable at first; if the discomfort continues for more than three weeks it is well to examine the patient again. It is very common for those who have worn an astigmatic correction for some time with comfort suddenly to complain of discomfort when using them. In such a case it will be nearly always found that the frames have got bent so that the setting of the axis of the cylinder is wrong. All that is necessary is to send the glasses to the optician to have the frames readjusted.

Anisometropia.—In this condition the refraction of the two eyes is different. There are three principal varieties—two logical divisions, the second being subdivided into two varieties: (1) Those who have binocular vision. (2) Those who have not binocular vision: (a) Those who use their eyes alternately. One eye is then generally slightly myopic, while the other is hypermetropic; such patients use one eye for close work and the other eye for distance. (b) Those who only use one eye, the other being amblyopic. This is the condition that is threatened by every case of squint, and every possible effort must be made to avoid it.

(1) In this class where binocular vision is present the difference of refraction will usually be small, and the full correction should be given to each eye, even if the difference should turn out to be as much as $+4$ D. A fully corrected anisometrope may complain of some discomfort at first, which is due to the different prismatic action of the two lenses, when he turns his eyes in extreme directions. When he has learnt to move his head instead of his eyes the discomfort will disappear.

(2, a) Theoretically, of course, the correction should be given to each eye, and stereoscopic exercises enjoined so that he may obtain binocular vision. But, practically, these stereoscopic exercises have to be continued for such a long time that no child will have patience enough to persevere with them sufficiently to obtain any valuable result.

(2, b) Every effort must be made to regain the sight in an amblyopic eye, and the younger the child the speedier will be the recovery of its

sight. The full correction for each eye should be worn constantly; and at meal times the better eye should be covered by a piece of paper or card to force the child to eat his meals with the feeble sight of his amblyopic eye. It is important that the exercise should not be too exhausting to the eye, and that it should be regular, frequent, and not too long continued. Precisely the same course should be followed in every case of squint. The straight eye should be covered up, and the squinting one forced to do all the seeing necessary at meal times.

Retinoscopy.—I do not attempt to explain the principles of retinoscopy to those who are not familiar with the method, but to those who do practise it I should like to give one or two hints that will be found to save time enormously.

1. If the red reflex from the fundus is dull, and if it moves only slowly on rotation of the mirror, the error must be considerable. Do not waste time by trying weak lenses; indeed, it may even be difficult to see which way the reflex moves; put in a $+7$ D. at once and make another observation. If the reflex is still indistinct and the movement doubtful, substitute a -7 D. for the convex glass you have put in, and the reflex will look brighter and the movements will be more rapid and easier to see, showing that you are nearing the correction.

2. One observation is enough if proper attention be paid to it. Do not go on wagging the mirror a dozen times, it wastes time. It is just like percussing a chest a dozen times over the same spot; no further information is gained after the first percussion if the observation is made with proper attention.

Newcastle-on-Tyne.

A CASE OF "SPASTIC" CONSTIPATION.

By RICHARD GOMPERTZ, M.B., B.S. LOND.

THE patient, a man aged 39, has been under treatment at Duff House, Banff. Before admission he complained that for the last five years he had been increasingly troubled with constipation until his bowels never acted except under the influence of an aperient. One year ago he was examined by means of the X rays, and special attention was paid to the cæcum, about which it was thought that adhesions might exist, but nothing abnormal was found. The treatment then prescribed, and most carefully followed, consisted of massage to the abdomen, aperients, and a diet made up of foodstuffs such as porridge, brown bread, green vegetables, &c., which were chosen on account of the large amount of stimulating residue which they leave. His condition, however, failed to improve under this régime, and he was admitted to Duff House.

On arrival the patient complained of a feeling of fullness and discomfort in the region of the cæcum and ascending colon. He stated definitely that this sensation was aggravated by taking food, and was accompanied by irritability and depression. He had no gastric indigestion, and had never been troubled with feelings of weight or dragging at the back passage and had not suffered from piles. A motion was seldom produced by an enema, the rectum being usually empty.

A series of X ray photographs was taken by me in the X ray Department at Duff House, and it was found that the bismuth passed with normal, or even greater than normal, speed through the intestine

FIG. 1.

Twenty-four hours after bismuth meal.

FIG. 2.

Thirty-two hours after bismuth meal.

FIG. 3.

Forty-eight hours after bismuth meal.

FIG. 4.

Fifty-four hours after bismuth meal.

until it reached the splenic flexure. (Fig. 1, 24 hours after meal.) It was expected that the next stage would be the collection of a large mass of faeces in the pelvic colon and rectum, and that the case would prove to be one of common constipation of the usual form. The next photograph showed, however, a more interesting state; that portion of the bismuth which had reached the transverse colon had been rapidly transferred to the pelvic gut, as was expected, but the descending colon was now contracted and remained in this condition for a considerable time. Fig. 2, which shows this condition well, is reproduced from a photograph taken 32 hours after the meal; by comparing it with Fig. 1 it will be noted that the transverse colon is also contracted. Fig. 3 shows the condition 16 hours later; the transverse colon is admitting material, but the descending colon is still closed. The last photograph reproduced (Fig. 4) was taken 54 hours after the meal, and shows nearly all the bismuth in the descending colon or lower, but even at this time the spasm has not completely disappeared. It seems that this contracture would overtax the propulsive powers of the cæcum and ascending colon, and this idea is borne out both by the patient's sensations and by the unusual size of the cæcum.

In view of these X ray findings it appeared desirable to give a concentrated diet with little residue; to avoid entirely those aperients the action of which is largely to stimulate the large intestine, substituting for them belladonna; and to limit abdominal massage strictly to manipulations directed to empty the overloaded cæcum. Treatment was therefore begun on these lines and has met with success. A pill containing one-sixth of a grain of belladonna was given three times a day for the first few days; the feelings of discomfort vanished and normal motions were passed, the patient continuing to have daily evacuations with no medication whatever.

It is hardly surprising that the former X ray examination, at which bismuth was introduced by the mouth and rectum, led to no positive findings, for such a condition as is here described could only be recognised by means of a series of photographs.

For permission to publish this case I am indebted to Dr. E. I. Spriggs, the senior physician at Duff House.

Banff.

EXTRA-ARTICULAR ANKYLOSIS OF THE INFERIOR MAXILLA

DUE TO FOREIGN BODIES IN THE SCALP FOR TEN YEARS.

BY WILLIAM MACDONALD, M.B., C.M. ABERD.,
L.R.C.P. & S. EDIN.

THE peregrinations of foreign bodies are well known, and the case described below gives additional proof of Nature's untiring efforts to get rid of her enemies, though if unaided they may be futile. In the temporal region foreign bodies, such as a piece of wood, a sequestrum, or pus, may be equally disturbing influences, since they may travel downwards and forwards from the temporal fossa into the spheno-maxillary fissure and descend into the mouth, or downwards and backwards on to the temporo-maxillary joint. Again, a foreign body may travel downwards from the temple and become impacted behind the orbit.

In this case grave mechanical interference was produced behind the orbit in front and the temporo-maxillary joint behind.

The patient, a man aged 25, consulted me on June 3rd, 1912, for a small swelling on the side of the right cheek in front of the ear above the zygoma. He gave the following history. When a Schoolboy (September, 1902), engaged in erecting a goal-post, the transverse bar fell and struck him tangentially on the head at a spot near where the temporal crest crosses the coronal suture—the stephanion. He was rendered unconscious for perhaps a couple of minutes. On regaining consciousness he found a wound nearly a quarter of an inch long, and went to a cottage close by and had it bathed with cold water. On getting back to school a cold water compress was applied, and on the next day the wound was "sealed," as he termed it, with sticking plaster. The tissues in the vicinity of the wound, however, began to swell, and he had to stop work for a month, by the end of which time the swelling had extended from the side of the head on to the face so that his features were hardly recognisable on the right side. He was sent home, and there saw his medical man, who lanced the swelling and squeezed out "a quantity of semi-gelatinous red substance," which substance continued to ooze out for a few days until the wound closed and dressings were no longer required.

In September, 1903, he entered as an engineer apprentice, and in 1908 commenced his career at sea as an engineer. During these years he still had a swelling on the right temple which caused frequent locking of the jaw. This locking was so troublesome that once during his apprenticeship his medical man was called in, and he tried to overcome the locking by leverage with a cork. The locking of the jaw came on without warning and went away spontaneously. The pain was so severe that mastication and talking became very difficult. The condition would last one or two days and then pass off, but it was exceedingly inconvenient during his first voyage, as occasionally he could not eat.

In September, 1908, a surgeon was consulted and an exploratory operation was performed on the scalp over the temporal attachment by a semi-circular incision between four and five inches long. An infinitesimal fragment, supposed to be steel, was found and removed. The swelling was not reduced nor did it subside. Electric massage, full strength, was tried, but as the patient suffered acute pain and mental depression this method of treatment was abandoned. Then his medical man tried counter-irritation. Iodine and blistering were used, but the condition was not improved, and the patient resumed his life at sea, plying for three years between Australia, New York, and the River Amazon.

When he came under my observation in June, 1912, there was a hard fusiform swelling occupying the right temporal region and a small fluctuating swelling over the centre of the upper margin of the zygomatic arch. Suspecting pus, I advised fomentations for three days to the fluctuating swelling, and on June 6th by a vertical incision removed a small quantity of pus, and on squeezing the sides of the wound removed seven small pieces of blackened wood like the graphite core of a cedar pencil; closely fitted together they measured $1\frac{1}{2}$ inches. The wound was packed with double cyanide gauze every two or three days, but would not close; a small sinus remained. Then there occurred marked difficulty in opening and closing the