

ness round the eyes, which may be sufficient to cause continued work an impossibility. There can be no doubt that this at least is non-inflammatory pain.

The probability is that this usually depends on the disturbance between the normal relation of convergence and accommodation. It is certain that hypermetropes who squint complain with much less frequency of these symptoms than do non-squinting hypermetropes of similar grade. In ordinary emmetropes, the relation between convergence and accommodation is simple; at rest the visual areas are parallel and the eyes are focussed for an infinite distance. When an object at a metre from the eyes is fixed, an accommodative effort of one dioptré, and a convergence of a definite amount are made together. If the object approaches the eye, the accommodative effort and the convergence increase almost equally. This relation is so close that it is impossible, or at least very difficult for any emmetrope to converge without accommodating or to accommodate without convergence.

In a hypermetrope, on the other hand, this co-ordination is all upset. An accommodative effort varying with the degree of hypermetropia is necessary to see objects clearly even at an infinite distance, but no convergence. The mechanism is still further interfered with on accommodating for near objects. The pain, then, is due to a disturbance of the centres for ocular adjustment, started by a congenital defect in the shape of the eye. Whether we are justified in regarding petit mal, chorea, and even epilepsy itself to be due to anatomical ocular deformity, as do some American surgeons, is, I think, more than doubtful, but I can see no reason for questioning the probability that their attacks would be hastened and multiplied by any nervous trouble or such a strain as is present in this condition. It is a curious fact that slight areas of refraction, especially small degrees of astigmatism, may and often do give rise to severe headache, more severe than is found with higher grades of ametropia. In all probability this is due to the fact that the possessors of large errors do not try to overcome them except momentarily on any special occasion, and give up any attempt at permanent clear vision, relaxing their accommodation in the intervals.

A small error tempts the patient to keep his ciliary muscle constantly strained.

Whatever the reason be, there is no doubt that the symptoms do not vary proportionately with the error.

Similar headaches occasionally are due to defective adjustment of the external muscles of the eye. If the position of rest be such that the visual axes are not parallel, a nervous effort is required

to correct the malposition. A lateral error can be to some extent disregarded; it is always possible to correct a considerable error voluntarily, since the relation between the visual axis in the horizontal plane is not always parallel, but varies from parallelism to a variable degree of convergence, as the gaze is directed at a distant or near object. It is different, however, when we consider a vertical deviation. The two visual axes should never leave the same horizontal plane, and there is no mechanism corresponding to that of convergence by which any deviation is corrected. A very small amount of adjustment is possible, but demands a strain which cannot be maintained permanently without unduly taxing the nerve centres; if at any time the general health becomes impaired, the ocular strain is manifested by headaches, etc.

All these symptoms may usually be relieved by the use of suitable glasses, which correct the refractive as well as small muscular errors. If the abnormalities of muscular adjustment are large, a preliminary operation to enforce a weakened muscle may be necessary.

It is well to bear in mind that the correction does not always give immediate relief, though, as a general rule, it succeeds from the first. In some cases the headaches persist for weeks or months before they yield to the constant use of the glasses. Often tonics, quinine, and iron will relieve; sometimes I have found ammonium chloride, in doses of gr. xx. three times a day, most efficacious.

*(To be continued.)*

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## Appointments.

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### MATRON-IN-CHIEF.

Miss Sidney J. Browne has been appointed Matron-in-Chief of Queen Alexandra's Imperial Military Nursing Service. In preparation for her distinguished military career she received her principal adult training at St. Bartholomew's Hospital. She also gained nursing experience at the Guest Hospital, Dudley, and the Hospital, West Bromwich. She entered the Army Nursing Service in 1883, in connection with which she has worked up to the present time, first as Nursing Sister and then as Superintendent of Nurses. Miss Browne, who has done her work splendidly well, is marked out both by her commanding personality, and rare charm of character for a leading position in her profession. In our opinion the Secretary of State for War could not have made a happier selection for this important position, and we heartily congratulate the Military Nursing Service on its Chief—she is worthy of its respect and affection.

[previous page](#)

[next page](#)