school-days, and suffered almost constantly from headache. In 1880 I treated him for an anterior choroiditis of the left eye, from which he made a perfect recovery, but I did not succeed in relieving the asthenopia. Last June I again had an opportunity to examine the eyes, and found, under atropine: R. +0.75 s. $\frac{2}{20}$. L. +0.75 s. ⌒ 0.75 c., 90° $\frac{2}{20}$. There was slight insufficiency of the internal recti, with exophoria 1° and left hyperphoria 1°. A correction of the latter gave immediate freedom from headache, and was soon followed by a marked improvement in his general health.

There can be no doubt that visual imperfections which call for a constant and abnormal expenditure of nerve force, such as must necessarily be the case where there is loss of equilibrium, or of the visual axes in any direction, is not only a frequent cause of morbid conditions in the eyes themselves, such as conjunctivitis, blepharitis and keratitis, perhaps, too, of deeper seated inflammatory affections of these organs, but also of headache, migraine, neuralgia and other nervous disorders. That they cause deterioration in the general health almost goes without saying.

Every subject of such visual defects as these is handicapped or over-weighted to just such an extent that he is liable to break down before the finish. In the cases I have quoted I have not, for obvious reasons, gone fully into details, but enough has been said to show their bearing on a subject which seems to me to merit more attention than hitherto has been bestowed upon it, even by those who have to do exclusively with ophthalmic surgery; and, I am convinced, the facts I have endeavored to bring forward may be used as a key to unlock the hidden secret of many obscure and troublesome cases that would otherwise stand as an opprobrium to medical art, bidding defiance to all its resources.

ON THE NECESSITY FOR A MODIFICATION OF CERTAIN PHYSIOLOGICAL DOCTRINES REGARDING THE INTERRELATIONS OF NERVE AND MUSCLE,

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SECTION OF THE SPLANCHNICS.

In a "demonstration of the vasomotor functions of the splanchnic nerves," the chief editor of the "Hand-book for the Physiological Laboratory" (*a*), informs his readers that these nerves contain vasomotor fibres which "are distributed to the arteries of the abdominal viscera."

We approach this "demonstration" expecting to find that when these nerves are cut the predicted results will follow in the arteries they supply being more or less "relaxed" or "dilated." What is our disappointment to find in all that follows in this chapter of the "Hand-book," the arteries are never once alluded to! Thus the very pith and point of the so-called "demonstration" is entirely ignored! What occurs is thus stated by Dr. Burdon Sanderson: "After section of both nerves the vessels of all the abdominal viscera are seen to be dilated. What "vessels" are these? Not the arteries, because Dr. B. S. continues: "*The portal system is filled with blood;* the small vessels of the mesentery and those which ramify on the surface of the intestine are beautifully injected; the vessels of the kidney are dilated, and the parenchyma is hyperemic; all of which facts indicate, not merely that by the relaxation of the abdominal blood-vessels, a large proportion of the resistance to the heart is annulled, but that *a quantity of blood is, so to speak, transferred into the portal system, and thereby as completely discharged from the systemic circulation as if a great internal hemorrhage had taken place.*" (*b.*) [Italics mine.] It needs no italics to give point and force to this remarkable admission. It is merely stating, with a little circumlocution, that the arteries are empty and the veins are full! The "beautiful injected vessels," which the learned editor so much admired, are not arteries but veins, the blood in which has become "bright red, like arterial blood," as Prof. Kuss explains of venous blood in the mesentery, because oxygenation has been effected simply by exposure to the air." (*c*)

The contraction and emptiness of the arteries, after section of the vasomotor nerves, is thus proved on the very highest authority. Where now is the justification of the assertion that after a section of this kind the arteries are dilated and hyperæmic?

Whatever obscurity there might be as to the actual results of section of the cervical sympathetic, for obvious reasons, there can be no mistake

* Read before the Physiological Section of the Ninth International Medical Congress, held in Washington, September, 1887.

(*a & b*) Amer. Ed., p. 258, p. 260.
(*c*) Lec. Phys., p. 326.