

thesia and so on. When one further realizes that the eye is one of the most vascular of organs, and that in proportion to its size it is the most freely supplied with nerves, that the optic nerve is in direct intimate connection with the brain, one ceases to wonder that disorders of its nervous and vascular constituents are frequent.

I have already remarked that one of the occasional accompanying symptoms of normal menstruation is dimness of vision. This dimness takes the form of definite contraction of the field of vision. This has been carefully worked out by Finkelstein.* He states that there is a notable contraction of the field of vision, that it begins two or three days before the flow, and reaches its greatest intensity on the fourth day, and gradually disappears on the eighth or ninth day, and that the amount of shrinkage varies in individuals. Not only is the field constricted for white, but also for green, red, yellow and blue. In twenty per cent. of his observations the appreciation of green was seriously impaired. The central vision was only slightly affected. I have had under observation a lady who on three occasions had attacks of hemi-anopsia during menstruation. As might be expected, she was greatly alarmed, but for more than a year she has had no attack, so it is to be hoped it will not recur. Women who are hyperopic, and who suffer from asthenopia, are always worse during their periods. Amenorrhœa of that variety which is characterized by entire absence of or very scanty menstruation, is often associated with eye trouble. I was consulted March 31st, 1890, by a young lady aged twenty-two, who had for three years complained of failing sight. She had had pains in and about the eye, and headache after use of the eyes. Her vision was $R = \frac{1}{2}$, $L = \frac{1}{4}$, slightly improved by +1. Examination of the fundus revealed a partial atrophy of the optic nerve. She stated that she had never menstruated. She appeared to be well developed. A few days after her sister was brought to me complaining of somewhat similar symptoms. The vision equalled $\frac{1}{2}$, not improved by glasses. I did not succeed in materially improving her condition, and she passed from my observation. Mooren†

relates a case of interstitial keratitis in a twenty-eight year old peasant girl who had suffered from corneal inflammation since her fifteenth year. The exacerbations came on regularly every month. She had never menstruated. Strong emmenagogues brought on a slight discharge, but it would fail to reappear the following month. Treatment to the eyes was of no avail. A most curious case is related by Heusinger.* He describes a case of vicarious menstruation in which blood oozed on one occasion from the eyelids, generally from the cheeks, often from the nipples, seldom from the hands, once from the ear, many times from the mouth and nose, and occasionally from the vagina. In consequence of ovarian dropsy and inflammatory attacks the uterus, vagina, rectum and bladder communicated, so that feces escaped from either or all the passages. A condition which is analogous in its effects upon the visual apparatus is the menopause. The disturbance of the nervous system at that period is attended by the rapid development of presbyopia. Asthenopia, irido-choroiditis, glaucoma, neuritis and optic atrophy are the not infrequent attendants on this critical period in woman's life. The condition which is fraught with the greatest danger to vision is sudden suppression of the menses from such causes as fright, mental excitement, anxiety, over-fatigue, grief, shock, etc. The sudden arrest of the flow causes a distension of the vessels, especially of the head, with disastrous effect. Sudden, complete and permanent blindness may result from suppression of the menses. Mooren† cites a case (of Samelsohn's) of amaurosis occurring in a young girl twenty-one years of age who, while menstruating, walked into a cold running brook with bare feet. The flow was immediately arrested. The same evening she complained of pain and weight about the eyes. The next day a slight defect in vision was complained of. The sight gradually failed, so that in five days one had lost perception of light. The ophthalmoscope showed slight haziness of the retina and enlargement of the retinal veins. Under antiphlogistic treatment, in three days quantitative perception of light returned. In eleven days she could read with the right eye No. 1, and with the

*Dissertation, St. Petersburg, 1887. *Ophthalmic Review*, VI., No. 73.

†Gesichtsstorungen und uterinleiden. A.F.O. 1881.

*Schmidt's Jahrbuch. Vol. IX., page 91, quoted by Cohn.

†Loc. cit.