

in acute indigestion, and by the common phenomena of pain in the eyeballs and specks before the eyes that often accompany functional disturbances of the liver.

Migraine presents a variety of ocular phenomena of great interest in this connection. The scotomata, the clouds, the flimmering, the zigzags of light, the hemianopsia and the diplopia, as well as the pain, the nausea, and the vomiting, observed in migraine seizures, are commonly transient symptoms. The pain and the ocular-motor paralysis of the ophthalmoplegic type of migraine, however, are not transient symptoms; they may persist days, weeks or months; so that, in this category of cases, what appeared at the outset to be a functional disease will prove to have had an organic basis. Again, the common symptoms of any and every type of migraine may occur and recur in diseases of the cerebral vessels, notably in the endarteritis of tertiary syphilis.

It is evident, therefore, that this symptom-complex may be correctly interpreted only by competent investigation of the entire organism, comprising examinations of the visual apparatus, the cerebrospinal and the sympathetic systems, the circulatory system, the abdominal viscera, and the genito-urinary organs. The generality of cases may be regarded as examples of a true neurosis, in which heredity plays a role. There are other cases, presenting the same symptomatology, which are due to anomalies of the organs of sight. And there are still others, that are based upon pathological changes elsewhere than in the visual apparatus. The differentiation of these cases is a problem of manifold perplexities, a problem in fact that in a very typical manner reveals the relationship of ophthalmology to general medicine.

*Pathologic* changes in the structures of the eyeball are concomitant phenomena of pathologic changes in other regions. Thus ophthalmoscopic examination discloses an early symptom of cerebral tumor and cerebral abscess.

Choked disc often precedes the localizing symptoms of tumor. Double choked disc associated with headache, not