of vision, and indeed it is difficult to demonstrate that it ever does." Now, in looking over Dr. Webster's cases, I find not one in which the patient who used alcohol did not *smoke* to excess. On the other hand two who smoked to excess used so little alcohol that I think even Dr. Webster would not claim it had any share in the effect upon sight, proving, so far as Dr. Webster's cases are concerned, that tobacco alone may impair sight, and that in no case was alcohol the only or even the chief factor in the causation of the amblyopia.

E. g. Case 7, C. McK—, æt. 49. Has smoked 10-15 strong cigars daily for ten years ; *occasionally* drinks a glass or two of gin. Vision = $\frac{1}{16}$ each eye. Incipient atrophy of optic nerves.

Case 12, æt. 60. Sight failing over a year. Has smoked a strong pipe most of his waking hours for more than forty years. Has *rarely* tasted liquor. Vision equals $\frac{1}{40}$ each eye. Brick dust atrophy of both optic nerves. Ordered to stop tobacco, and return in a week. *Then* vision in right eye *doubled*, in left eye all but doubled.

McKenzie, one of the worthy fathers of ophthalmology, originally pointed out the effects of tobacco. In 1840 he wrote, "I have already had occasion repeatedly to hint my suspicion that one of the narcotico-acrids, which custom has foolishly introduced into common use, namely tobacco, is a frequent cause of amaurosis." In that pre-ophthalmoscopic day, amaurosis meant obscurity of vision, depending upon a supposed morbid condition of the retina or optic nerve (McKenzie). In the present day, the terms amaurosis and amblyopia give rise to great confusion, from their various application. It would perhaps be best to restrict the term amblyopia to all cases of impaired sight, and amaurosis to cases of absolute blindness, without ophthalmoscopic symptoms. More recently, Wordsworth, Critchett, Hutchinson, &c., have given great attention to the effects of tobacco upon the eye, and believe it gives rise to impaired sight and blindness, with or without ophthalmoscopic signs. Hutchinson, who is probably the best authority on tobacco amaurosis, wrote in 1867 as follows: "The first stage, one which is very transitory, and perhaps often altogether omitted, is one of congestion, during which the optic disc looks too red. Then follows pallor of the outer parts of the nerve disc. During these stages the patient complains of dimness of vision merely. In a later stage the whole disc has become pale, even to blue milk whiteness, and later still there is advanced atrophy. The stages generally occupy from four months to a year. In many cases the patient becomes at length absolutely blind, but in others the disease having advanced to a certain point, is arrested. There is from first to last no evidence of any disease of any structure in the eyeball, excepting the optic nerve. Almost always both eyes are affected, and progress *pari passu*. Sleepiness, a little giddiness, and a little headache, are usually the only constitutional symptoms which attend it." Three-fourths of his cases recovered. In a personal interview with Mr. Hutchinson at Moorfield, in 1875, he remarked he had come to think the effect of alcohol antagonistic to tobacco, as a cause of amblyopia, unless the alcohol is taken in such excess as to produce degenerative or undermining effects on the constitution. He had seen amblyopia more frequently and more advanced in smokers who abstained from alcohol, than in those who took it. Dr. Berry also holds a similar opinion. He cites two cases of tobacco amblyopia ; one a man of seventy, who had been a teetotaller for forty years, and the other a boy of 19, who did not drink. Berry, in common with many others, has remarked the symptoms often gradually disappear on the cessation of smoking, without any other treatment, and frequently without the supply of alcohol being diminished.

Since Hutchinson's description of tobacco amblyopia in '67, he, in common with many others, has examined more systematically the field of vision and color vision, and has found that the diminution in sight is confined to central or direct vision, while usually, eccentric vision remained relatively good, and they have found that color-blindness exists over a portion or the entire extent of the visual field. The color-blindness is for red or green, the red appearing blue, and the green appearing white, gray or yellow. The color-blindness in slight cases of amblyopia requires very careful examination to determine, as it is confined to the central part of the field, particularly within an area stretching from the optic nerve to the macula.

In 37 cases of atrophy of the optic nerve, Hutchinson attributed 30 to the effects of tobacco, and in 36 cases of optic nerve atrophy, Lebr found color-blindness an almost constant symptom, the