Pigmentary Degeneration of the Retina after Quinine Intoxication

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It seems a curious fact that two such widely differing diseases as primary pigmentary degeneration of the retina and quinine intoxication can have so much in common. The one caused by an unknown agent, developing slowly, with long remissions, in a score of years or more, the other occurring with dramatic swiftness in a couple of hours, after the ingestion of a well-known and well-defined toxic substance. Both befalling only persons with a certain, though unknown, disposition, both leading to a marked constriction of the visual field, to an extreme attenuation of the retinal vessels and atrophy of the optic disc, both causing hemeralopia and both, even, associated with deafness.

Without the anamnesis it might often be difficult to differentiate between the two diseases, were it not for the << bone corpuscle» pigmentation of the fundus. This clustering of the retinal pigment is,

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of course, not typical for primary pigmentary degeneration: we know it to occur in syphilis, and by atoxyl and some aniline dyes in direct contact with the retina. However, I know of no case of quinine poisoning in which this pigmentation has been observed, and therefore the following description may be of interest.

A Dutch girl of 12 years, living at Batavia (Java), got malaria when she was nine months old. Quinine sulphate was given, and after two days vision became very bad. The dose is not known, but since the quinine was prescribed by a well-known doctor with many years' experience in malaria, we may assume that it was not above normal. Though the drug was suspended

immediately, the condition has never improved. Vision on both eyes is 1/60 now, with slow and irregular nystagmus. The visual field is greatly restricted to about 5 degrees from the fixation point. Probably there is night-blindness; the anamnesis is not certain about this point since owing to the irregular conditions in Batavia at the time of investigation, the child is never allowed to go out after dark, and an adaptometer is not available.

The media are clear; the pupils react normally to light and convergence; the external eye muscles are normal too. The optic disc is chalk-white, flat and sharply-defined; from it extend four chalk-white streaks, presumably vessels, which can be followed for a short distance and then disappear altogether. No blood column can be seen in these vessels, but on the disc there are three extremely fine red lines corresponding to the three largest streaks (see Fig). The colour of the fundus is normal, the chorioidal pattern just discernable. There are no abnormalities in the macular region (redfree light is not available). In the periphery there is a broad ring of typical «bone corpuscle» pigmentation, which grows scarcer towards the ora serrata. Except in the immediate vicinity of the optic disc there is no trace of vessels in the whole extent of the retina. The picture is exactly the same in both eyes.

The child does not show any signs of the Laurence-Moon-Bíedl syndrome, it is healthy and very intelligent, though rather nervous. The Wassermann test is negative. The two other children are quite normal, and so is the mother. The father died in an internment camp on Java. There was no family relation between the parents.

Summary

Description of a case of quinine intoxication by a normal dose at the age of nine months in a girl now twelve years old, presenting the picture of pigmentary degeneration of the retina.

Zusammenfassung

Beschreibung eines Falles von Chininvergiftung im Alter von neun Monaten, bei einem jetzt zwölf-jährigen Mädchen, durch eine normale Menge Chininsulfat. Der Augenhintergrund zeigt das Bild einer Pigment-Degeneration der Netzhaut.

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Resume

Description d'un cas d'intoxication à la quinine par une dose normale à l'âge de neuf mois chez une fillette actuellement âgée de douze ans présentant l'image d'une rétinite pigmentaire.