Six cases of central serous choroidopathy induced by systemic corticosteroid therapy

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Abstract. We report 6 cases of central serous choroidopathy (including pigment epithelial detachment in one case) which appeared in the course of systemic corticosteroid administration conducted to cure concurrent general diseases, and in one patient with a steroid-releasing pituitary adenoma. The majority of cases arose within about one month following the administration of more than 200 mg of prednisolon. It is postulated that corticosteroids operate as a kind of stress intervening in the hypophysis-adrenal system, leading eventually to the development of central serous choroidopathy.

Introduction

Numerous theories have been proposed to elucidate the etiology of central serous choroidopathy (Coscas, 1972; Horniker, 1929; Harrington, 1977, Kitahara, 1933; Sie-Boen-Lian, 1964). Above all, stress, emotional or physical, has been implicated as one of the plausible causes of this disorder (Bennet, 1955, Hartmann, 1953), because it has been said that the latter occurs preferentially in a middle-aged man with tense temperament (Mori, 1971; Matsui and Komoto, 1962), engaged in such occupation as the management of an organized society.

The relationship between corticosteroid treatment and the development or an exacerbation of central serous choroidopathy failed to attract attention until some Japanese authors including Wakakura (1977) and Shimaya et al. (1984), based upon three cases and one case respectively, indicated the presence of such a relationship.

We report in this paper 6 cases of central serous choroidopathy that arose during the course of corticosteroid therapy destined to bring a cure to underlying disorders or of steroid-secreting tumours and then discuss the possibility that the steroids operate as a kind of stress to the eye by intervening the hypophysis-adrenal system.
Case reports

Case 1

A 55 year-old-female was referred to us for blurred vision having developed in recent years. She had undergone prednisolon therapy of 40mg/day prednisolon for ten days owing to suspected hepatitis. Ophthalmoscopic examination revealed a localized serous detachment of the sensory retina at the macula.

The visual acuity was 0.9 OD and 0.4 OS by correction. Fluorescein angiography demonstrated 5 discrete hyper-fluorescent areas at the posterior pole. On campimetry a central scotoma was disclosed.

Prednisolon medication was gradually reduced from 40 mg to 15 mg daily over a period of 30 days.

Case 2

On July 1982 a 38 year-old-female was referred to the neurological service for consultation concerning headache and appetite loss of 2 months duration. A diagnosis of lymphoepithelioma in the epipharynx was made and cobalt therapy was initiated in conjunction with dexamethazon infusion which was continued during a one-month period with a dose of 4 mg/day.

On 9 September the patient was referred to us for an ophthalmologic examination because complaints of visual disturbance since 5 days. Ophthalmoscopy disclosed the presence of a serous detachment of the sensory retina at the macular region. Campimetry showed a 5-degree central scotoma. On fluorescein angiography a solitary leak was found about 2 disc diameter distant from the fovea (Figure 1). The leak was photocoagulated with the argon laser with excellent result; the patient’s visual acuity returned to normal.

Case 3

In March 1979 a 43 year-old-female was referred to us for metamorphopsia. In April 1977 she underwent extirpation of pituitary microadenoma manifested in Cushing’s disease which had lasted for two years. Regression of various symptoms originating from the disease was soon followed by a recurrence in the beginning of 1978. She had noted an attack of metamorphopsia three times, in 1971, 1972 and 1973.

Ophthalmoscopy revealed pigment migration at the macula and no evidence of serous detachment of the sensory retina was obtained. Furthermore, fluorescein angiography demonstrated a hyperfluorescent area at the macula without signs of leakage. A diagnosis of central serous choroidopathy in the cicatricial stage was made. In October 1981, she was reexamined because of a one-month history of densification of a central scotoma that she had noticed earlier. Ophthalmoscopy disclosed a localized detachment of the sensory retina at the macular region in addition to tiny retinal hemorrhages (Figure 2). The latter were supposed to represent hypertensive changes in retinal vessels.