

Central retinal vein occlusion in hypertensive patients with chronic hepatitis C treated by interferon α and ribavirin

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Although the incidence of interferon-retinopathy, characterized by retinal hemorrhages and soft exudates, is relatively high, it rarely leads to visual disturbance. Consequently, recent reports suggested no need of discontinuation of interferon administration or even ophthalmologic monitoring,^{1,2)} as long as retinopathy remains visually asymptomatic.

We describe two cases of interferon-retinopathy with severe visual disturbance caused by **secondary** central retinal vein occlusion (CRVO). Both cases were complicated by hypertension **which was poorly controlled because of limited medication compliance**.

Case Reports

A 60-year-old woman started to take pegylated interferon- α and ribavirin for the treatment of chronic hepatitis C. In her right eye, soft exudates and hemorrhages **appeared** in one month; however, they almost completely resolved in another 8 months remaining **only** a few soft exudates (figure 1a). However, she suddenly developed CRVO after 11 months of the treatment. Her best-corrected visual acuity (BCVA) was 0.02 (OD). Macular region **was** filled with soft exudates, and hemorrhages were observed all over the retina (Figure 1b). A fluorescein angiography showed extensive **nonperfusion** area in the corresponding macular region (Figure 1c). Although she underwent urokinase administration and hyperbaric oxygen treatment, her right BCVA remains 0.1.

A 61-year-old woman developed blurred vision **in the right eye** after 6 months of treatment with pegylated interferon- α and ribavirin. Ophthalmologic evaluation revealed scattered or flame-shaped retinal hemorrhages (Figure 2). Since she had not undergone ophthalmologic examination before, there was no information regarding previous retinal status. Her BCVA was 0.1 (OD), which recovered to 1.2 (OD) after urokinase administration and hyperbaric oxygen treatment.

Comments

Interferon retinopathy, a microcirculatory disorder of the retina characterized by soft exudates and retinal hemorrhages, was first described by Ikebe in 1990.³⁾ Reported risk factors of interferon retinopathy include hypertension, diabetes mellitus, high interferon dosages, ribavirin and pegylated interferon.⁴⁾ Both hypertension and diabetes also disrupt retinal microcirculation. Han et al reported a case of symptomatic interferon retinopathy successfully treated by hypertension management without stopping interferon administration.⁵⁾ Even if interferon retinopathy is observed in ophthalmologic monitoring, it may be difficult to discontinue the treatment of interferon- α and ribavirin considering their excellent effects on hepatitis C treatment. However, as the present cases demonstrate, interferon retinopathy could lead to vision threatening diseases such as CRVO.

In case interferon administration is continued for the treatment of chronic hepatitis C, systemic complications that affect retinal circulation such as diabetes mellitus and hypertension should be optimized. Even if retinopathy appeared to be completely resolved, retinal changes should be closely monitored since resolution of soft exudates did not guarantee the amelioration of the interferon retinopathy.

References

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Figure Legends

Figure 1

- a) Right fundus (9 months). Most soft exudates were absorbed and only a few of them are left (arrows).
- b) Right fundus (11 months) Central retinal vein occlusion with extensive soft exudates formation is observed in the macular region.
- c) Right fluorescein angiogram (11 months) Wide spread non-perfusion area is observed in the macular region.

Figure 2

- a) Right fundus; a flamed-shaped hemorrhage and scattered dot hemorrhages are observed.



