1. Introduction

Surgery is one of the various stimulants that can reactivate herpes simplex virus (HSV) and cause new-onset ocular infection. Postoperative herpetic keratitis has been reported to complicate laser-assisted keratomileusis, penetrating or lamellar keratoplasty, and cataract surgery [1-3]. However, HSV has never been deemed as a possible etiology of postoperative endophthalmitis. We report a case of herpetic endophthalmitis following cataract surgery.

2. Case Report

A 65-year-old diabetic man underwent uneventful phacoemulsification and vision improved within the first few postoperative days. However, visual loss with an anterior chamber reaction of +++++ and a ++ vitreous cell were noted in the 4th postoperative week. Repeated intravitreal injection of vancomycin and ceftriaxone, pars plana vitrectomy and removal of the intraocular lens (IOL), and the capsular bag were performed sequentially but in vain. Bacterial, mycobacterial, and fungal culture of the IOL and capsular bag demonstrated negative findings. Pathological examination revealed no pathogen but a number of mononuclear cells and several multinuclear giant cells. Serology exam revealed positive herpes simplex virus immunoglobulin (Ig)M and IgG. The intraocular inflammation resolved soon after changing antibiotics to oral valacyclovir.

We report a case of herpetic endophthalmitis following cataract surgery. A 65-year-old man underwent uneventful phacoemulsification and vision improved within the first few postoperative days. However, visual loss with an anterior chamber reaction of +++++ and a ++ vitreous cell were noted in the 4th postoperative week. Repeated intravitreal injection of vancomycin and ceftriaxone, pars plana vitrectomy and removal of the intraocular lens (IOL), and the capsular bag were performed sequentially but in vain. Bacterial, mycobacterial, and fungal culture of the IOL and capsular bag demonstrated negative findings. Pathological examination revealed no pathogen but a number of mononuclear cells and several multinuclear giant cells. Serology exam revealed positive herpes simplex virus immunoglobulin (Ig)M and IgG. The intraocular inflammation resolved soon after changing antibiotics to oral valacyclovir.
3. Discussion

Postoperative endophthalmitis is a serious complication of phacoemulsification. Early diagnosis and accurate treatment lead to better prognosis. However, the positive culture rate is never ideal. Sheng et al [4] reported a 60.1% positive culture rate of intraocular samples from endophthalmitis after cataract surgery. In the ESCRS study of prophylaxis for endophthalmitis, nine out of 29 failed to yield a positive result in Gram stain, culture, or polymerase chain reaction [5]. The causes of the imperfect culture rate might include inadequate specimens, improper laboratory techniques, a small quantity or slow growth of pathogens, or a viral etiology as in our patient.

Both surgical trauma and diabetes mellitus (DM) are risk factors for HSV infection. DM is known to facilitate bacterial, mycotic, and viral infection. Postoperative HSV keratitis has been reported without preexisting HSV eye disease [6,7]. However, HSV has rarely been deemed a possible etiology of postoperative endophthalmitis. Our initial measurements did not cover the possibility of viral etiologies. We did not consider viral infection until we saw several multinucleated giant cells among numerous mononuclear cells under microscopic examination of the capsular bag tissue. The diagnosis of herpetic endophthalmitis was also supported by serological examination, the response to antiviral agents, and the occurrence of HSV dendritic keratitis after discontinuation of antiviral drugs. Although we finally came to a true diagnosis, the sequel of months of inflammation, toxicity of antibiotics, extraction of the PCIOL and the capsular bag, and dendritic keratitis reduced the quality of life of our patient.

HSV uveitis without corneal involvement is more frequent than previously thought. Absence of corneal involvement delays a correct diagnosis and worsens visual outcome [8]. HSV should be considered a possible cause of refractory postoperative endophthalmitis.

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