Two ultraviolet radiation-induced episodes of optic neuritis in a patient with antinuclear antibody

Sir, Exposure to the ultraviolet (UV) radiation of sunlight may induce disease flares with extracutaneous manifestations in systemic lupus erythematosus (SLE) [1]. There is only one previous report on UV-induced neurological manifestations in SLE [2]. Here the case is presented of a 49-yr-old Caucasian female who suffered two episodes of UV-induced optic neuritis.

In April 1997, the patient presented with deteriorating vision in her right eye, proceeding to blindness within 2 weeks (Fig. 1). The ophthalmologist found lack of vision in the upper half of the vision field, ability to count fingers only at 20 cm distance in the lower half and lack of colour vision. The papill was swollen with blurred margins. After 1 week on 60 mg prednisolone, the patient regained almost normal vision. For half a year, however, the papill remained slightly swollen and the field of vision slightly concentrically restricted in the upper part. In May 1995, the patient had experienced decreased vision and lightning phenomenon in her left eye. Vision and fundoscopy were normal; perimetry was not performed. Only after half a year, the patient recovered spontaneously. Both incidents occurred 1 week after returning from a 2-week-long ski-ing holi-

![Fig. 1. Serial data on two flares of optic neuritis in a 49-yr-old ANA-positive Caucasian female.](image-url)
Antibody to cardiolipin was negative, APTT normal, serology was all negative. The patient had the HLA type A24(9), B27,45 with DRB1*08; DQB1*04 homozygous. A thorough neurological examination was normal. A high-titre ANA. However, optic neuritis might be the debuting symptom in SLE [10]. The only report on UV-induced CNS lupus is that of a Swedish female SLE patient, suffering two attacks of myelitis after a vacation to the Balearics [2]. Optic neuritis is often combined with myelitis in SLE, a combination named Devic’s opticomyelitis. The manifestations constituting Devic’s syndrome might thus be more easily inducible by UV light than other CNS manifestations in SLE.

Generally, there are several ways to avoid UV radiation: use of sunscreens, tinted car windows [5], avoidance of cool, white, fluorescent light. Moreover, thanks to the Montreal protocol, it is hoped that the ozone depletion rate will decrease [3].

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Accepted 21 June 1999

3. Björn LO, Callaghan TV, Gehrke C, Johanson U, Sonesson M, Bachofen V. Aberrant timing in epidermal expression of inducible nitric oxide synthase [7] in keratinocytes. This may even have systemic effects. The UV-B-induced change of trans- to cis-urocanic acid suppresses cell-mediated immunity. Moreover, UV-B decreases the ability of Langerhans cells to stimulate CD4+ Th1 cells and activates CD4+CD45RA+ suppressor-inducer T cells, probably changing the immunological scene in favour of B-cell activation [4, 8]. UV-A may provoke systemic flares directly by penetrating into the subcutis vasculature. On the other hand, longer wavelength UV light, i.e. UV-A1 (340–400 nm), may have flare-preventing effects in SLE [9].

The only characteristic of SLE in the present patient was a high-titre ANA. However, optic neuritis might be the debuting symptom in SLE [10]. The only report on UV-induced CNS lupus is that of a Swedish female SLE patient, suffering two attacks of myelitis after a vacation to the Balearics [2]. Optic neuritis is often combined with myelitis in SLE, a combination named Devic’s opticomyelitis. The manifestations constituting Devic’s syndrome might thus be more easily inducible by UV light than other CNS manifestations in SLE.

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