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Letter to the Editor

Declining cytomegalovirus retinitis in ART-experienced women from North India

Dear Editor,

Widespread coverage of antiretroviral therapy (ART) at an affordable cost has led to a decline of 32% in new HIV infections in India, with a slowing down of the epidemic. This is expected to change the prevalence and pattern of ophthalmic manifestations seen in HIV-positive individuals. A study on 1000 HIV-positive individuals, enrolled from 1993 to 2010, had reported cytomegalovirus retinitis (CMVR) in ~25% of the patients without commenting on temporal trends.¹

In 2015–2016, we examined 50 HIV-positive women (median CD4 count 495 cells/mm³) on a three-drug ART regimen (two nucleoside reverse-transcriptase inhibitors, plus a non-nucleoside reverse-transcriptase inhibitor), for posterior segment involvement, including CMVR. Examination involved dilating pupils with an effective mydiatic, followed by eye examination by a vitreoretinal surgeon and recording the treatment history and CD4 counts.

Ten (20%) of these women had ophthalmic involvement (Table 1), but we did not find a single case of CMVR in the 100 eyes examined, even though 14% of the women had confirmed cervical shedding of CMV. The study subjects had CD4 counts ranging from 39 to 902 cells/mm³ (median 495).

Two previous studies from the same centre, in 2004–2005² and 2010–2012,³ in adult and paediatric population, respectively, found CMVR in 20% of 100 HIV-infected

individuals (68% ART-experienced; 50% with CD4 counts <100 cells/mm³) and in 3 (1.1%) of 187 children (mean CD4 count, 638 cells/mm³), respectively. At the time of the first study from our centre, the policy guidelines under the National AIDS Control Program were to initiate ART at a CD4 count of <200 cells/mm³, which was sequentially increased to <350 cells/mm³ and then <500 cells/mm³ (during this current study). The change in scenario after a decade is evident with a sharp decline in CMVR possibly associated with earlier initiation of ART and may decline further with introduction of the 'Test and Treat' policy for HIV in 2017. However, ophthalmic screening should continue for ophthalmic manifestations of both HIV and CMV. As seen in the USA, ART coverage has not completely eliminated CMVR, and it may rise again with an increase in drug-resistant HIV (accompanied by low CD4 counts) in India as well. It has been reported that the spectrum of ocular manifestations of AIDS in the developing world differs from that of the developed nations and also ocular manifestations of AIDS in children differ from those diagnosed in adults. Also, the spectrum of ocular lesions in HIV-positive patients from the Indian subcontinent is different from that seen in other parts of the world, with fewer cases of CMVR seen. However, as this study was conducted at a tertiary level centre and in ART-experienced women maintaining their CD4 counts, the true CMVR prevalence in the community may differ.

Table 1 – Distribution of eye lesions in ART-experienced HIV-positive women (n = 50) and CD4 counts at the time of examination as per CDC classification.

HIV-related ophthalmic manifestations	Findings	Number	CD4 counts (cells/cu.m.m)		
			Less than 200	200–500	More than 500
HIV microvasculopathy	Cotton wool exudates	1 (2%)	–	1	–
	Retinopathy	1 (2%)	–	1	–
Opportunistic infections	Healed toxoplasmosis	2 (4%)	–	2	–
	Choroidal tubercle	1 (2%)	–	1	–
Neuro-ophthalmologic	Optic neuropathy	2 (4%)	–	1	1
	Bilateral disc oedema; Papilloedema	1 (2%)	–	–	1
Nonspecific (unrelated to HIV)	Rod-and-cone dystrophy	1 (2%)	–	–	1
	Retinitis pigmentosa	1 (2%)	–	–	1
CDC, centre for disease control.					

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