Complexities of Psychiatric Care for Individuals with HIV Infection and Co Morbid Vision Loss- Practical Recommendations for Clinical Management

Oral Communication
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César A. Alfonso MD*
Associate Professor of Psychiatry, Columbia University Medical Center
Chief Psychiatrist- Lighthouse Guild International, USA
*Dr. Alfonso does not receive any commercial support and reports no conflicts of interest
E-mail address: caa2105@columbia.edu

Biopsychosocial Aspects of Vision Loss in Persons with HIV

Biological	Psychological	Social
• OIs • IRU • Iatrogenic	• Depression • Anxiety • Paranoia	• Social Isolation • Stigma

Ocular manifestations of HIV (pre HAART era, 1981-2000)

- CMV retinitis would occur in 30-50% of patients
- HIV retinopathy in 40-60% of patients (cotton wool spots in association with retinal hemorrhages/focal ischemia)
- Ocular surface diseases:
  - Kaposi sarcoma
  - Herpes zoster ophthalmicus
  - Corneal microsporidiosis
  - Molluscumcontagiosum
  - Conjunctivalmicrovasculopathy

Ocular manifestations of HIV (post HAART era, 2000-present)

- Cidofovir and rifabutin iatrogenic uveitis
- Non-infectious visual disturbances:
  - Reduced contrast sensitivity
  - Altered color vision
  - Visual field abnormalities
- Marked reduction of CMV retinitis in post HAART era
- Complications of CMV retinitis:
  - CMV disease reactivation
  - Immune Recovery Uveitis (IRU) in up to 60% of cases
  - Retinal detachments (RD)

Immune Recovery Uveitis

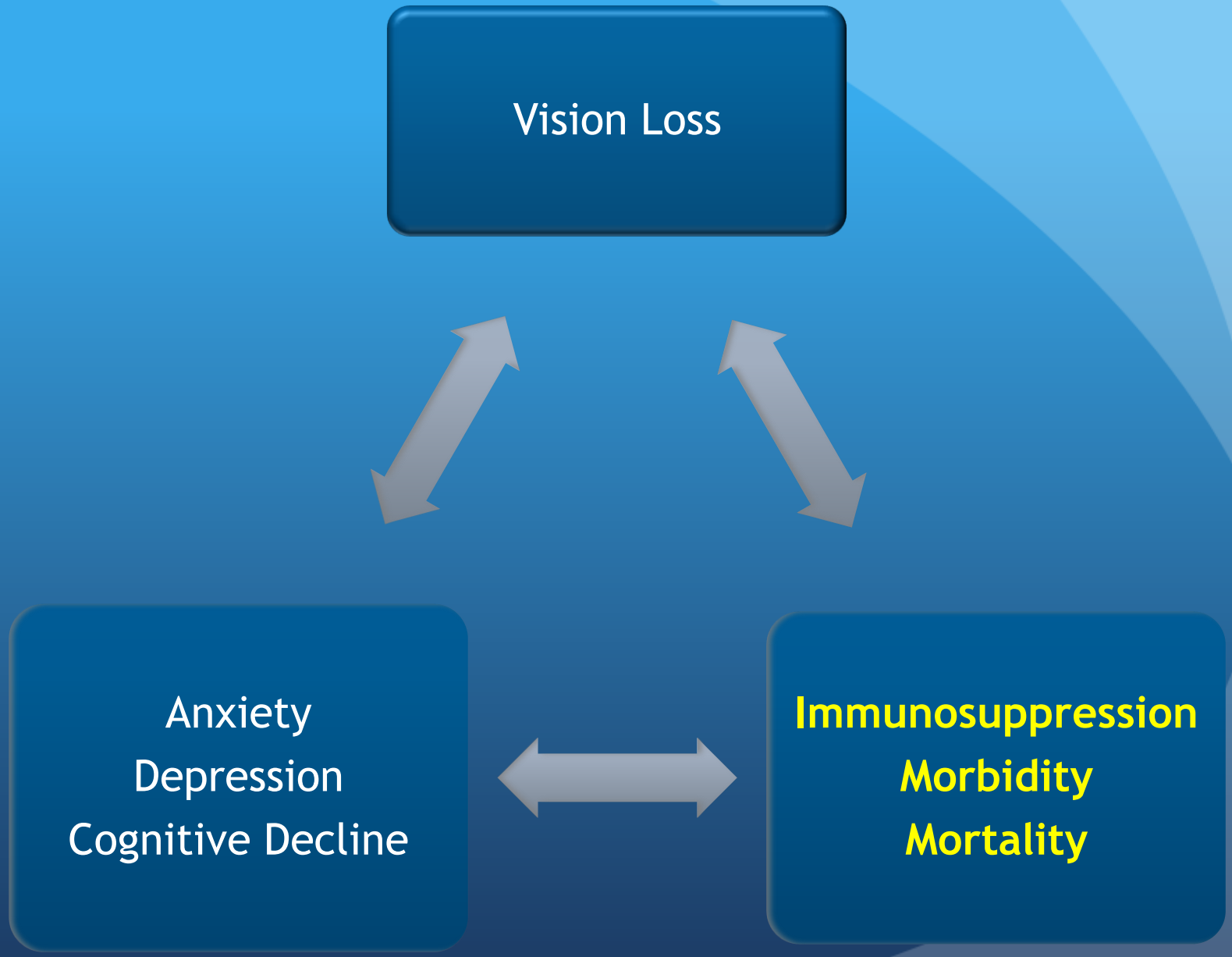
- Present in many treated cases of CMV
- Inflammatory response to CMV antigens triggered by HAART within weeks of treatment, that can persist with complications such as:
  - cystoid macular edema
  - epiretinal membrane formation
  - neovascularization of the retina or optic disk
  - cataracts

Access to HAART

- 40-80% of HIV infected persons worldwide do NOT have access to HAART in a timely fashion
- Over 60% of of all cases of HIV infection occur in sub-Saharan Africa
- Cost of HAART is approximately $20,000 USD per person per year

Vision Loss and Psychological Morbidity

- Association between vision loss and depression
- Association between vision loss and anxiety
- Exacerbation of cognitive dysfunction due to visual impairment
- Exacerbation of paranoia and hypervigilance as a result of vision loss
- Association between anxiety, depression and immunosuppression


Vision Loss
Anxiety
Depression
Cognitive Decline
Immunosuppression
Morbidity
Mortality

Ocular Adverse Effects of Psychotropic Medications

- Ocular dystonias
- Mydriasis
- Myopia
- Problems with accommodation
- Glaucomatous attacks
- Cataractous changes
- Impairment of discrimination of contrast and color perception

Ocular Dystonias

- Antipsychotics
- SSRIs
- SNRIs
- Carbamazepine
- Topiramate

Mydriasis

(alpha- adrenoreceptor mediated, noradrenergic; anticholinergic effects; binding of 5HT $_7$ receptor in sphincter of pupil)

- TCAs
  SNRIs
- SSRIs
- Antipsychotics
- Topiramate
- Stimulants

Problems with Accommodation

TCAs

Antipsychotics

BDZ

SSRIs
SNRIs

Anticholinergics

Myopia

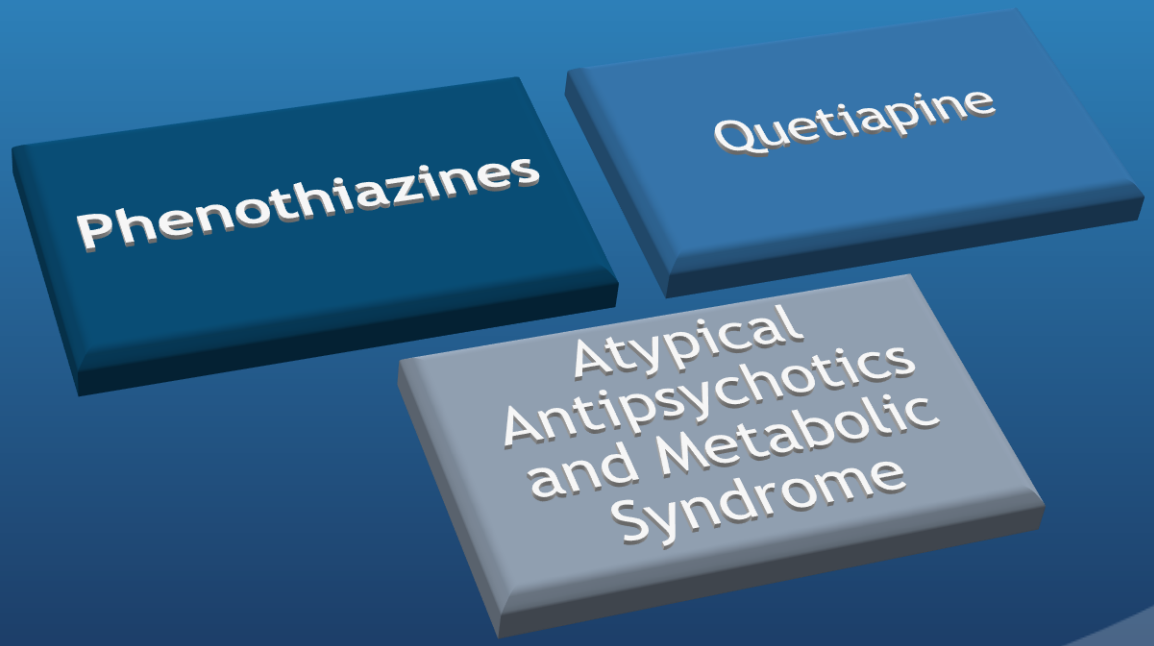
(interference with ionic concentrations influencing movement of sodium and chloride; uveal tract hypersensitivity and swelling of the ciliary body mediated by prostaglandins)

Glaucomatous Attacks

(secondary angle closure Glaucoma only) via mydriasis and swelling of the ciliary body

Cataractous Changes and Lenticular Opacities

(photosensitizing drugs that denature proteins; and free radicals produced by psychotropics that trap endogenous melanin)



Other Psychotropic Drug Induced Ocular Disorders

Nystagmus
- Lithium
- Lamotrigine
- Carbamazepine

Papilloedema
- Lithium

Abnormal Color Perception
- Carbamazepine

Loss of Contrast Sensitivity and Exophoria

Conclusions

Ocular manifestations of HIV are complex and encompass neuropsychiatric multimorbidities

Iatrogenic psychotropic side effects include ocular adverse effects compromising vision

Quality of life and improved immune function may result from optimized treatment that preserves vision

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caa2105@columbia.edu