SALUS UNIVERSITY
The Eye Institute

Pennsylvania College of Optometry
The Focal Point
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La Paix! Can this Supplement Cause a Pigmentary Epithelial Detachment?

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Demographics

57-year-old Black/African-American male

Chief complaint: Retinal Pigment Epithelial Detachment (PED) follow up and OCT MAC; presented for CEE 1 month prior when PED was suspected in each eye and diagnostic testing to be completed at follow up visit

History of present illness

Character/signs/symptoms: not affecting vision OU
Location: OU
Severity: N/A
Nature of onset: unknown
Duration: noted 1 month prior during routine exam
Frequency: N/A
Exacerbations/remissions: none
Relationship to activity or function: Has not taken OTC La Paix between appointments
Accompanying signs/symptoms: none

Patient ocular history: R/G color deficiency and use of PALs for 2 years

Family ocular history: Unremarkable; denies family history of glaucoma

Patient medical history

Denies Diabetes, Hypertension, Hypercholesterolemia, Asthma, Eczema

Medications taken by patient

La Paix Herbal Supplement

Patient allergy history: NKMA/NKDA

Family medical history

Mother: Diabetes, COPD, Hypertension
Father: Diabetes, Hypertension, Prostate Cancer

Review of systems

Constitutional/general health: denies
Ear/nose/throat: Cardiovascular: denies
Pulmonary: Endocrine: denies
Dermatological: denies
Gastrointestinal: denies
Genitourinary: denies
Musculoskeletal: denies
Neurologic: denies
Psychiatric: denies
Immunologic: denies
Hematologic: denies

Mental status

Orientation: oriented to person, place, and time
Mood/Affect: normal

Clinical findings

BVA:

	Distance	Near
OD:	$20/20^{-1}$	0.4/0.5M
OS:	$20/20^{-1}$	0.4/0.4M

Pupils: PERRL (-) APD OU
EOMs: Full with no restrictions OU

Confrontation fields: Full to finger counting OU
Hirschberg: Symmetric
Subjective refraction:

	VA Distance	VA Near
OD: plano sph/ +1.75 ADD	20/20	0.4/0.3
OS: -0.50 sph/ +1.75 ADD	20/20	0.4/0.3

Slit lamp:
Lids/lashes/adnexa: trace collarettes OU, flat freckle nasal inferior lid margin OS
Conjunctiva: white and quiet bulb conj OU, pink and quiet palpebral conj OU
Cornea: normal endothelium, epithelium, stroma, and tear film OU
Anterior chamber: deep and quiet OU
Iris: flat and intact, brown OU
Lens: trace nuclear sclerosis OU
Vitreous: syneresis OU
IOPs/method: Goldmann, OD: 14 mmHg, OS: 14 mmHg
Fundus OD:
C/D: PHD 0.45/0.45
Macula: flat and intact, PED inferior to fovea, superior RPE change with 1-2 drusen
Posterior pole: unremarkable with normal course & caliber of vasculature
Periphery: not assessed, previously dilated with unremarkable findings
Fundus OS:
C/D: PHD 0.45/0.45
Macula: flat and intact, PED temporal to fovea
Posterior pole: unremarkable with normal course & caliber of vasculature
Periphery: not assessed, previously dilated with unremarkable findings
Blood pressure: 160/96 mmHg RAS automatic; **Pulse:** 87 bpm

Case Images:

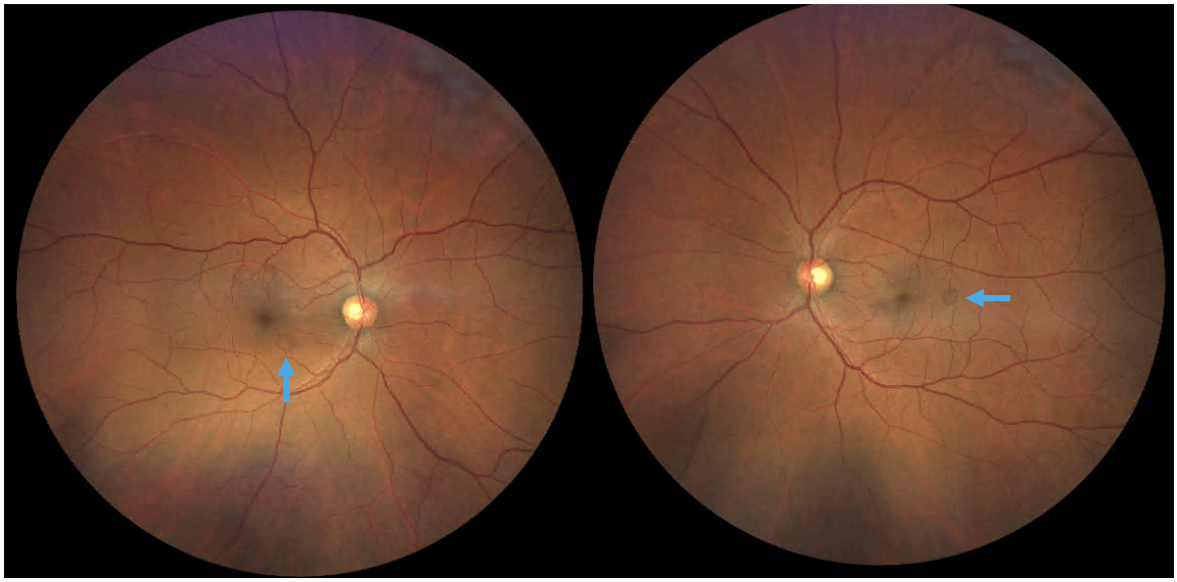

Image 1: Fundus photos of the right and left eye, respectively. Of Note: distinct circular elevations consistent with PEDs inferior to fovea OD and temporal macula OS (blue arrows)

OD

OS

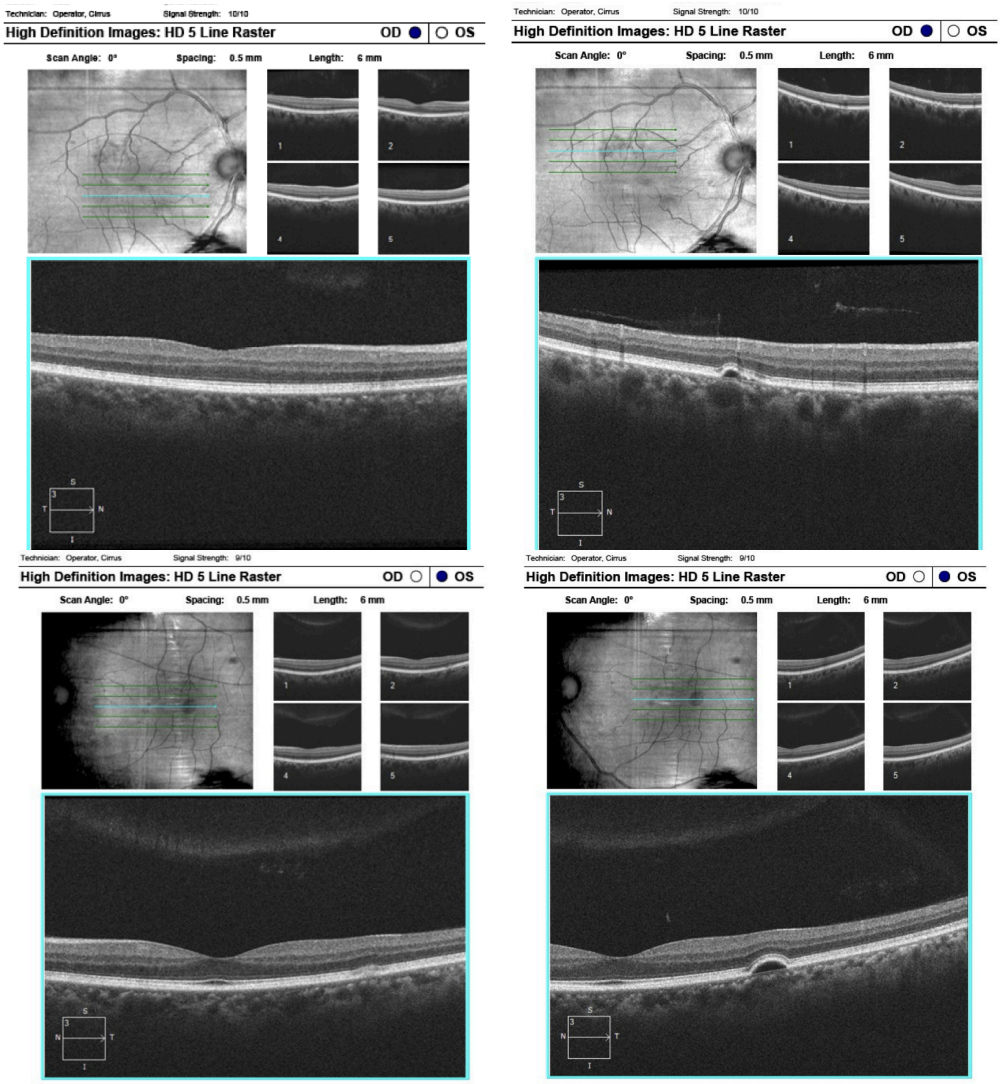

Image 2: OCT Scans with 5-Line Raster through maculae OD and OS (top left and bottom left images, respectively) along with 5-Line Raster Raster through lesions in question (top right image lesion inferior to fovea OD and bottom right image lesion temporal macula OS). Note that the elevations are homogeneously hyporeflective below the normal hyperreflectivity of the elevated RPE allowing us to rule out the presence of a CNVM.

Case Management Summary

A1: Other specified retinal disorders

Examination revealed bilateral focal ~0.25DD size serous RPE detachments OD>OS

- OCT Mac and 5 line Raster completed
- OD: Inferior fovea serous RPE detachment, (-) CNV
- OS: Temporal macula serous RPE detachment, (-) CNV

P1: Patient was educated on today's findings and that the current condition is not affecting his vision. No prescribed medications are the cause of this condition. Discussed with patient to talk to their PCP about switching to an FDA approved erectile dysfunction medication and stopping La Paix. Patient was taught how to use an Amsler Grid and explained how to use it everyday to monitor vision. Patient is to RTC immediately if any abnormalities are noted on the Amsler Grid. Patient expressed verbal understanding of the instructions. No treatment is indicated at this time. Referred for retinal consultation with retina OMD in 1 month. RTC in 6 months to monitor condition with OCT Mac and 5-line raster or sooner as needed.

A2: Myopia, left eye
Examination revealed clinical emmetropia OD and simple myopia OS w/ presbyopia OU

- BCVA: 20/20 OD, OS, OU

P2: Patient was educated on today's findings. A reprinted Rx was given to the patient at their request. RTC in 1 year or sooner if changes to vision are noted.

Case Pearls

Pigment Epithelial Detachments (PED) are a separation between the RPE and Bruch's membrane.

Deposition of lipids, serous fluid, or drusen may deposit on Bruch's membrane and disrupt the hydrostatic and osmotic forces that keep the RPE adjacent to Bruch's membrane[3]. This disruption can cause an elevation resulting in painless vision loss, metamorphopsia, distortion, or hyperopic shift, depending on location of the lesion.[1,2]

PED's may be caused by ocular diseases and systemic diseases.

The most common ocular disease associated with a PED is Age-Related Macular Degeneration (AMD) due to the accumulation of drusen below the RPE or neovascularization in progressed stages. Patients with AMD may present with drusenoid, serous, fibrovascular, or mixed PED.[2]

Central Serous Chorioretinopathy (CSCR) is another cause of PEDs. The classic patient presenting with CSCR is a Type A personality and male gender assigned at birth due to the proposed mechanism of increased glucocorticoids which increases the permeability of the choroid.[3]

Systemic diseases involving the renal system, inflammatory conditions, infections, neoplastic conditions, and certain cancers can cause PEDs. These conditions can cause a disruption of the RPE and Bruch's membrane relationship.[1]

OCT and stereoscopic dilated examination are used to diagnose.

When viewing with your 90D or 78D lens, clinicians may see an elevation that is yellow-white or clear in color. The type of PED present will determine the shape and outline of the lesion. Serous PEDs are typically yellow-white or clear distinct circular elevations that can be described as "dome-shaped". Drusenoid PEDs are typically yellow-white defined elevations and may have an irregular surface. Fibrovascular PEDs by definition are related to the presence of CNV. They appear as RPE elevations with an irregular surface and often with mixed serous and hemorrhagic or fibrous parts. Vascular PEDs may have hemorrhages as well.[1]

With OCT, PEDs will appear as dome-shaped elevation of the RPE over a defined and homogenous hypo-reflective space under the hyperreflective RPE, with Bruch's membrane being commonly visible as a straight, thin hyper-reflective line at the base of the elevation as depicted in this patient. Drusenoid PEDs will appear homogeneous moderately hyperreflective below the hyperreflective RPE. Drusenoid PEDs will display a ripple appearance on the OCT. Vascular PEDs will appear with irregular elevations that are heterogeneous. Vascular PEDs may have subretinal fluid above the vascularization.[1]

Other forms of testing that can be performed to aid in diagnosis: fundus autofluorescence, OCT-A, fluorescein angiography, and indocyanine green angiography.[1]

Currently, there is no treatment that is proven effective.

According to the American Optometric Association, treatment is not proven effective for this condition. For vascularized types of PEDs, various methods such as laser photocoagulation, photodynamic therapy, and anti-VEGF injections have been used to treat. Even though there are proposed treatment modalities, no gold standard is available and is up to the discretion of the co-managing retinal specialist.[1,2] If the PED is serous or drusenoid in nature, monitoring is the course of treatment with Amsler Grid and follow ups.[2]

La Paix is made from the leaves and bark of the neem tree.

La Paix is a herbal supplement marketed to increase the sexual power of males and is a product of the Ivory Coast, West Africa.[4] No research has been conducted on this particular herbal supplement, therefore the side effects are not well known, researched, or published.

The neem tree is known for its medicinal properties and used by many for homeopathic remedies. Neem tree is used to fight infections, inflammation, fevers, skin diseases, and some dental disorders.[5,6] Neem leaves have no reported side effects, but there is conflicting evidence regarding the effects on the kidneys and liver.[6]

This patient does not fit our typical patient profile of a PED which leads us to believe this supplement may have some impact on the physiology of this PED. Due to no published literature regarding this herbal supplement, we cannot say for certain if the patient's PED is related to his use of supplementation however; careful patient education and co-management with his PCP and retina is warranted.

References

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6. Seriana I, Akmal M, Darusman D, Wahyuni S, Khairan K, Sugito S. Neem Leaf (*Azadirachta indica* A. Juss) Ethanolic Extract on the Liver and Kidney Function of Rats. ScientificWorldJournal. 2021 Mar 30;2021:7970424. doi: 10.1155/2021/7970424. PMID: 33859543; PMCID: PMC8026305.