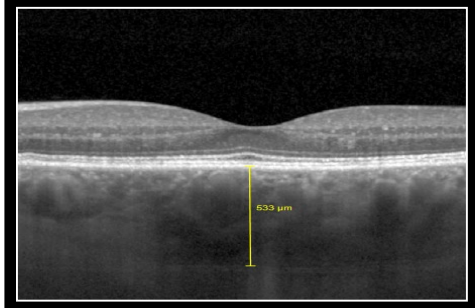
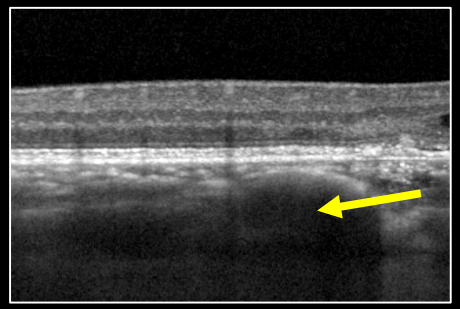
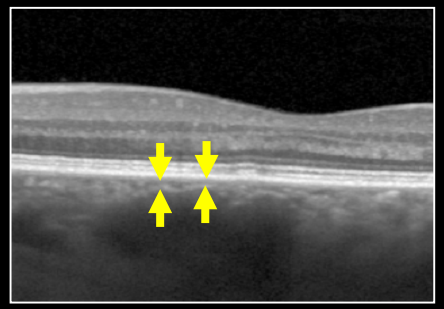
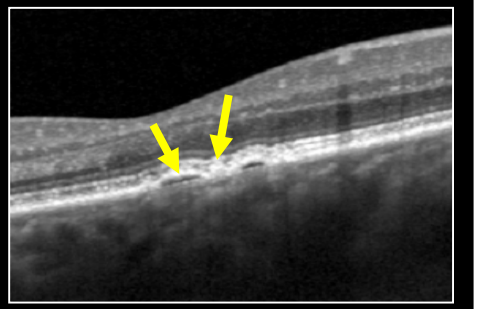
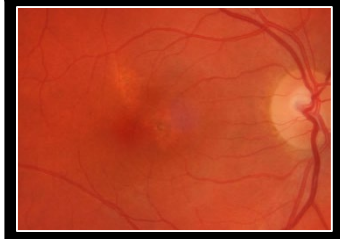
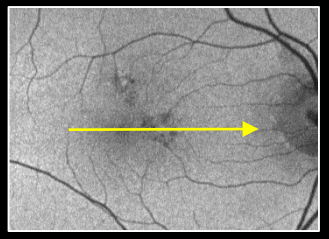
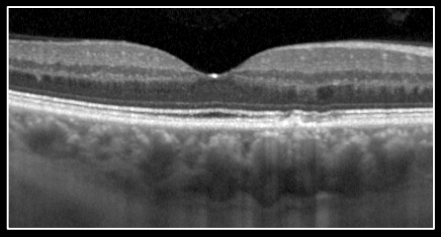
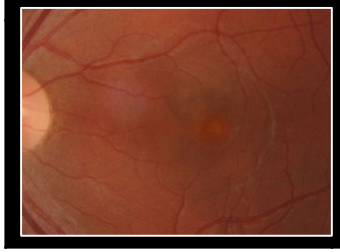
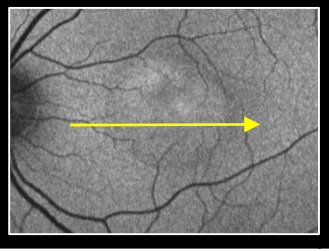
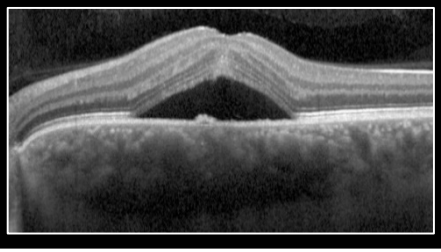
Centre for Eye Health

CHAIR-SIDE REFERENCE: PACHYCHOROID DISEASE SPECTRUM

PACHYCHOROID DISEASE SPECTRUM

The Pachychoroid disease spectrum is a group of conditions which have characteristic morphologic changes implicating a common underlying disease process causing structural and functional choroidal alteration. These common features are illustrated below:

Increased choroidal thickness	Dilated choroidal vessels	Overlying choriocapillaris attenuation	Associated RPE disturbances
			

Optomap/Retinal Photo	Fundus Autofluorescence	Optical coherence tomography (OCT)	Description
Pachychoroid Pigment Epitheliopathy (PPE)			
			• Considered a forme fruste variant of CSCR • Typically asymptomatic with minimal fundus signs – possible pigment alteration. • No present or past history of sub-retinal fluid • FAF shows granular hypo-fluorescence and/or mixed stippled hypo and hyper-fluorescence • Drusen-like focal RPE elevations seen on OCT, possibly with an associated serous pigment epithelial detachment (PED)
Acute Central Serous Chorioretinopathy (CSCR)			
			• Unilateral blur or metamorphospsia with a mild hyperopic shift • Raised appearance of the macula with frequent hyper or hypo pigment changes • FAF may show no apparent abnormality or hyper-fluorescence associated with the areas of sub-retinal fluid • OCT shows an well-defined serous retinal detachment usually associated with a PED.

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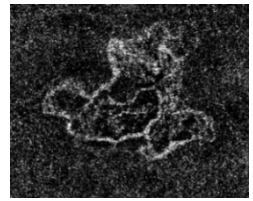
PACHYCHOROID DISEASE SPECTRUM

Optomap/Retinal photo	Fundus Autofluorescence	Optical coherence tomography (OCT)	Description
Chronic Central Serous Chorioretinopathy (CSCR)			• Widespread RPE decompensation with or without subretinal fluid • Long-standing cases are associated with hypo-fluorescent gravitational tracts on FAF • OCT shows outer retina and RPE atrophy • Risk of choroidal neovascularisation (CNV) increases with increased recurrence or chronicity • Reduced vision associated with macular atrophy and/or CNV
Pachychoroid Neovasculopathy (PNV)			• Development of type 1 CNV following PPE and/or CSCR. • Can progress to PCV (below) • May have associated blur or metamorphopsia • FAF highlights RPE changes overlying thick choroid • OCT shows a flat, irregular PED (double-layer sign)  OCT angiography shows 'tangled network' of flow signal corresponding to type 1 CNV
Polypoidal Choroidal Vasculopathy (PCV)/Aneurysmal Type 1 Neovascularization			• Serosanguinous maculopathy characterised by type 1 CNV ending in aneurysmal dilations, which appear as polyp-like structure • Associated with serous neurosensory detachment and/or submacular haemorrhage • Funduscopy shows orange-red subretinal nodules • FAF shows ring-shaped abnormalities with hypo-autofluorescent centre (correspond to polyps) and hyper-autofluorescent surroundings • OCT shows a sharp PED peak and surrounding flat, irregular PED. • Indocyanine green angiography is the gold standard for diagnosing PCV
Focal Choroidal Excavation (FCE)			• Localised area of choroidal excavation without evidence of posterior staphyloma or scleral ectasia • Asymptomatic or mild blurring of vision or metamorphosia • Funduscopy may be normal or show non-specific pigmentary changes • OCT shows two patterns of excavation – conforming (photoreceptor tips are in direct contact with RPE as shown here) and non-conforming (photoreceptor tips are detached from RPE)

*Please note peripapillary pachychoroid syndrome, is also considered part of the pachychoroid disease spectrum but not described in this reference.