POLYPOIDAL CHOROIDAL VASCULOPATHY

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HISTORY

- First described by Yanuzzi in 1982 as polypoidal,subretinal vascular lesions associated with serous and haemmorhagic detachments of RPE.

- Recognized widely as a subtype of Neovascular ARMD.

INTRODUCTION

- Polypoidal choroidal vasculopathy (PCV) belongs to the pachychoroid spectrum caused by a disturbance in choroidal circulation

- It is characterized by a branching vascular network of inner choroidal vessels with multiple terminal aneurysmal pro-tuberances that appear to be the source of bleeding and exudation.

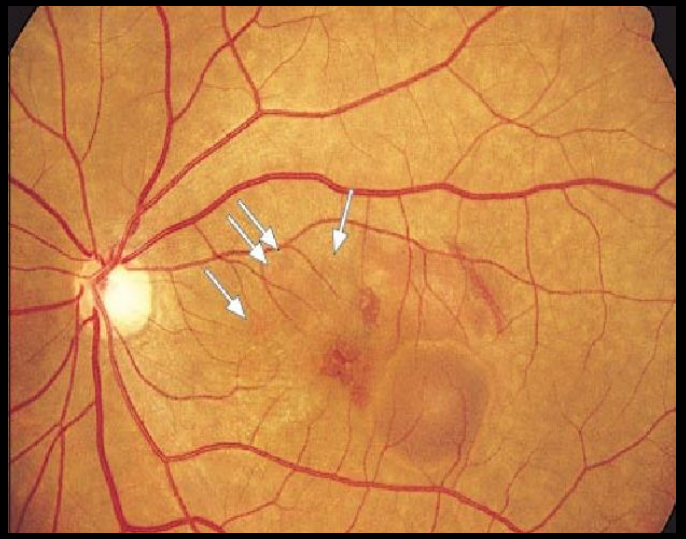
DEMOGRAPHICS

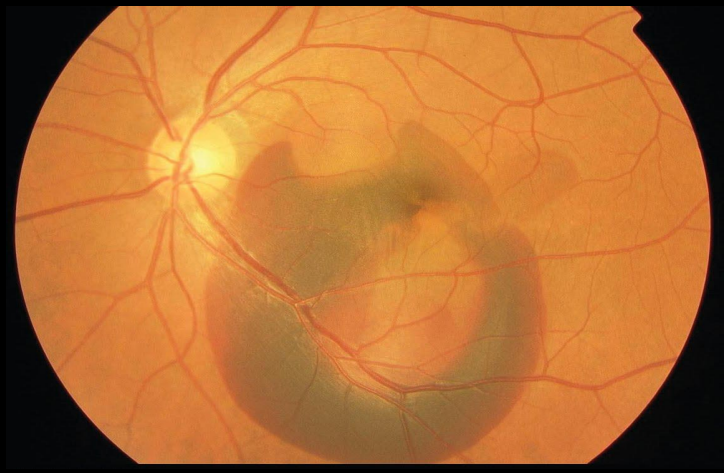
- Age : 50 -65 yrs
- More prevalent in blacks and Asian population
- Sex : M = F
- Laterality - Bilateral

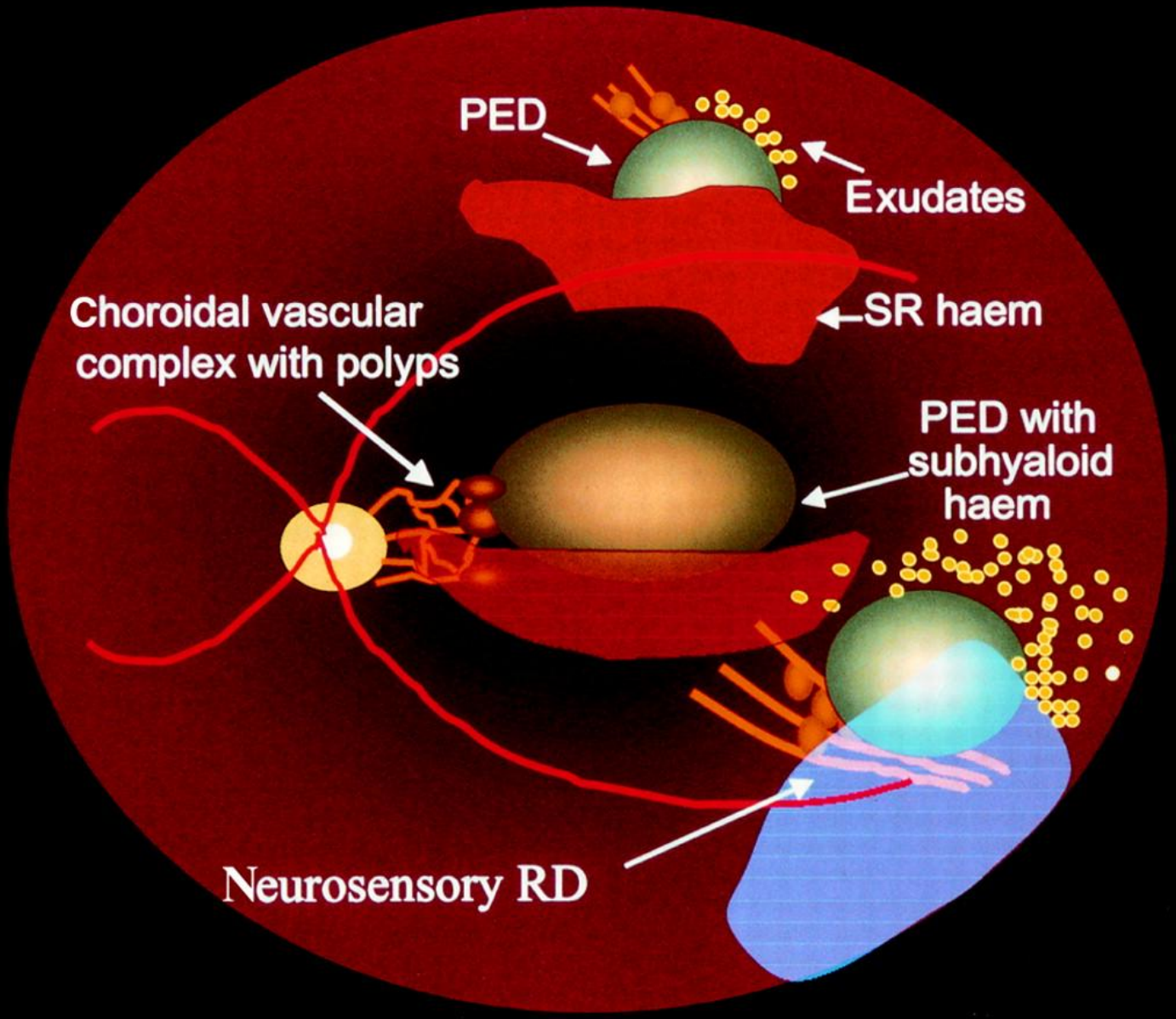
RISK FACTORS:
Hypertension
Smoking

CLINICAL FEATURES

- Neurosensory detachment
- Pigment epithelial detachment
- Subretinal Lipid exudation
- Subretinal Haemmorhage
- Occult pattern on FFA
  -hyperfluorescence






PED
Exudates
SR haem
Choroidal vascular complex with polyps
PED with subhyaloid haem
Neurosensory RD

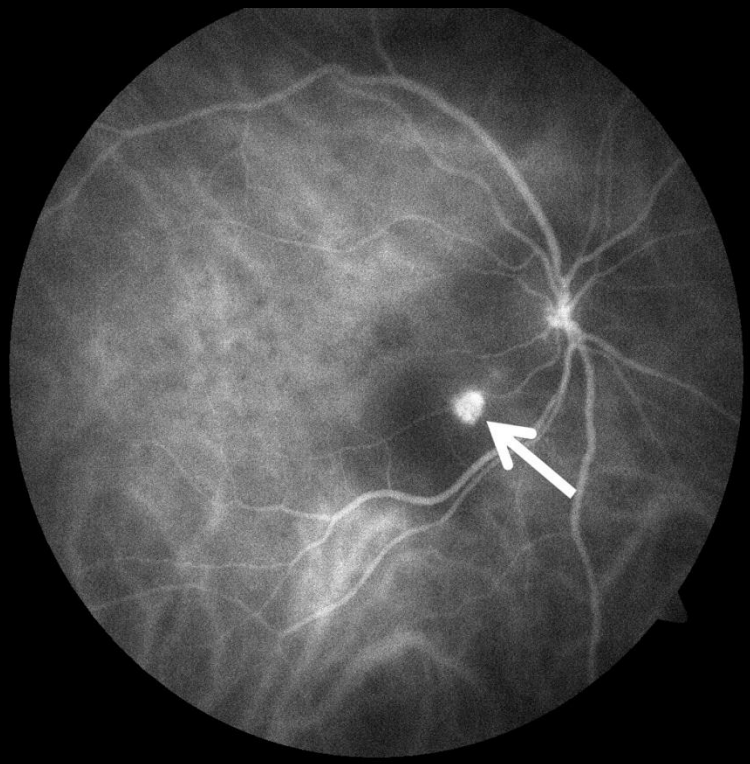
CLASSIFICATION

- **PCV Expert Panel (2013) :**

QUIESCENT	**Polyps in absence of SRF /intraretinal fluid or hemorrhage**
EXUDATIVE	**Exudation with neurosensory detachment ,PED, subretinal lipid exudation but without hemorrhage**
HEMORRHAGIC	**Haemmorhage with or without exudative characteristics**

ICGA characteristics of PCV

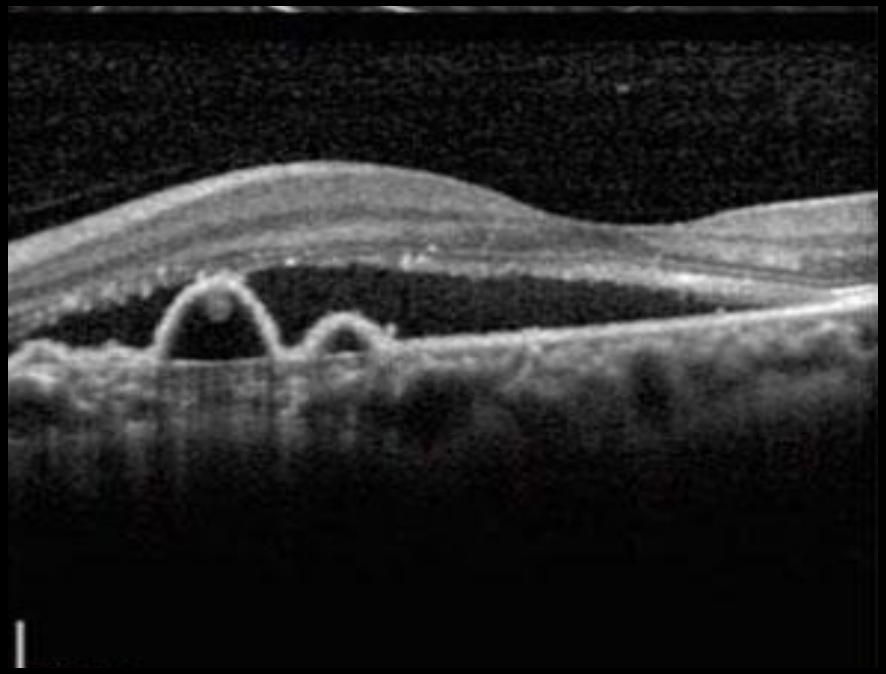
- **Gold standard for diagnosing PCV**
- **Polypoidal lesions show on ICGA as typical nodular hyperfluorescence**
- **Branching network pattern of inner choroidal vessels,Nodular polypoidal aneurysms or dilatations at edges of these abnormal networks ,presence of hypofluorescent halo (in first 6 minutes)**
- **Video ICGA – Pulsations can be observed**



OCT

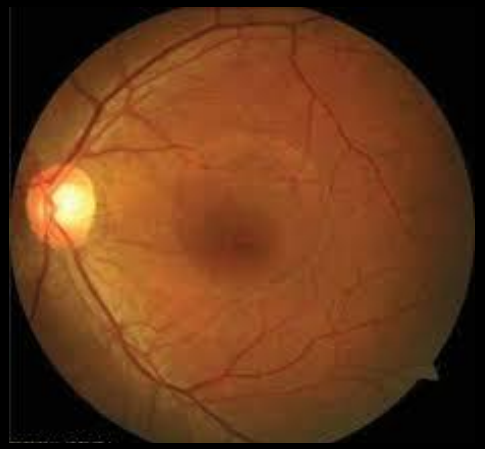
PCV can be suspected if any of the following features are present:

1) Sharp–peaked PED –Denotes Polyp
2) Tomographic Notch – Polypoidal lesion at margin of PED
3) Double Layered Sign: Presence of two hyperreflective lines representing RPE and Bruch's membrane, indicating abnormal vascular network



DIFFERENTIAL DIAGNOSIS

PATHOLOGY	DIFFERENTIATING FEATURES
NEOVASCULAR ARMD(CNVM)	In CNVM ,the sub RPE space is invaded with new vessels as seen in (Type 1 CNVM) In PCV , the RPE is usually intact with the polyp like structure arising mainly from the inner choroid
CSCR	PCV – ICGA features more pathognomic FFA – characteristic ink blot /smoke stack pattern



TREATMENT

MODALITY	
LASER PHOTOCOAGULATION	Can be helpful in extrafoveal PCV
PHOTODYNAMIC THERAPY	Causes regression/resolution of polyps Studies (Everest trial) 71.4% achieved complete occlusion of polyps in less than three rounds.VA improved in 80 -100% of patients after 1 year. Subretinal hemorrhage post PDT is common complication with a poor visual outcome
ANTI –VEGF THERAPY	IV injections (aflibercept , ranibizumab) have shown to regress polyps, resolution of SRF .
COMBINATION THERAPY	EVEREST Study : shown that Combination therapy / PDT monotherapy was better than intravitreal ranibizumab alone at 6 months
SURGERY	Pneumatic displacement with SF6 (Displacement of submacular hemorrhage) Submacular Sx (Submacular haemmorhage + breakthroygh VH)