Polypoidal Choroidal Vasculopathy Revealed by Progressive Visual Loss in a 75-Year-Old Hypertensive Patient: A Case Report

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ABSTRACT

Background:

Polypoidal choroidal vasculopathy (PCV) is a subtype of macular neovascular disease characterized by aneurysmal polypoidal dilations arising from abnormal choroidal vascular networks. It is often associated with age-related macular degeneration and may lead to progressive visual impairment.

Case presentation:

We report the case of a 75-year-old female patient with a history of systemic hypertension for 10 years who presented with progressive visual acuity decline evolving for approximately one year. Fundus examination revealed an abnormal macular reflex. Optical coherence tomography (OCT) showed a large pigment epithelial detachment associated with macular thickening. Fluorescein angiography demonstrated progressive hyperfluorescence with late leakage consistent with choroidal neovascularization.

Conclusion:

This case highlights the importance of multimodal retinal imaging in diagnosing polypoidal choroidal vasculopathy and identifying associated neovascular activity.

Keywords : *Polypoidal choroidal vasculopathy; OCT; fluorescein angiography; choroidal neovascularization; macular disease.*

1. INTRODUCTION

Polypoidal choroidal vasculopathy (PCV) is characterized by abnormal branching vascular networks with aneurysmal dilations located beneath the retinal pigment epithelium. It is considered by many authors to be a variant of neovascular age-related macular degeneration (AMD) [1].

The disease mainly affects elderly individuals and may lead to serous or hemorrhagic macular detachment. Imaging modalities such as optical coherence tomography (OCT) and fluorescein angiography play a key role in establishing the diagnosis [2].

We report a case of PCV diagnosed in a 75-year-old hypertensive patient presenting with progressive visual impairment.

2. CASE PRESENTATION

A 75-year-old female patient presented with progressive visual acuity decline evolving over one year. Her past medical history included systemic hypertension treated for the last 10 years.

Ophthalmologic examination revealed:

- decreased visual acuity
- normal anterior segment
- fundus examination showing abnormal macular reflex with macular alterations

To further investigate the macular lesion, fluorescein angiography and optical coherence tomography (OCT) were performed.

3. Imaging Findings

Macular OCT revealed:

- a large dome-shaped pigment epithelial detachment (PED)
- irregular elevation of the retinal pigment epithelium
- central macular thickening reaching approximately 387 µm
- alterations of the outer retinal layers

These findings suggest exudative macular pathology related to choroidal vascular abnormalities.

Fluorescein Angiography

Fluorescein angiography demonstrated:

- a hypofluorescent macular area in early phases
- progressive hyperfluorescence
- late dye leakage

These findings are consistent with active choroidal neovascularization, supporting the diagnosis of polypoidal choroidal vasculopathy.

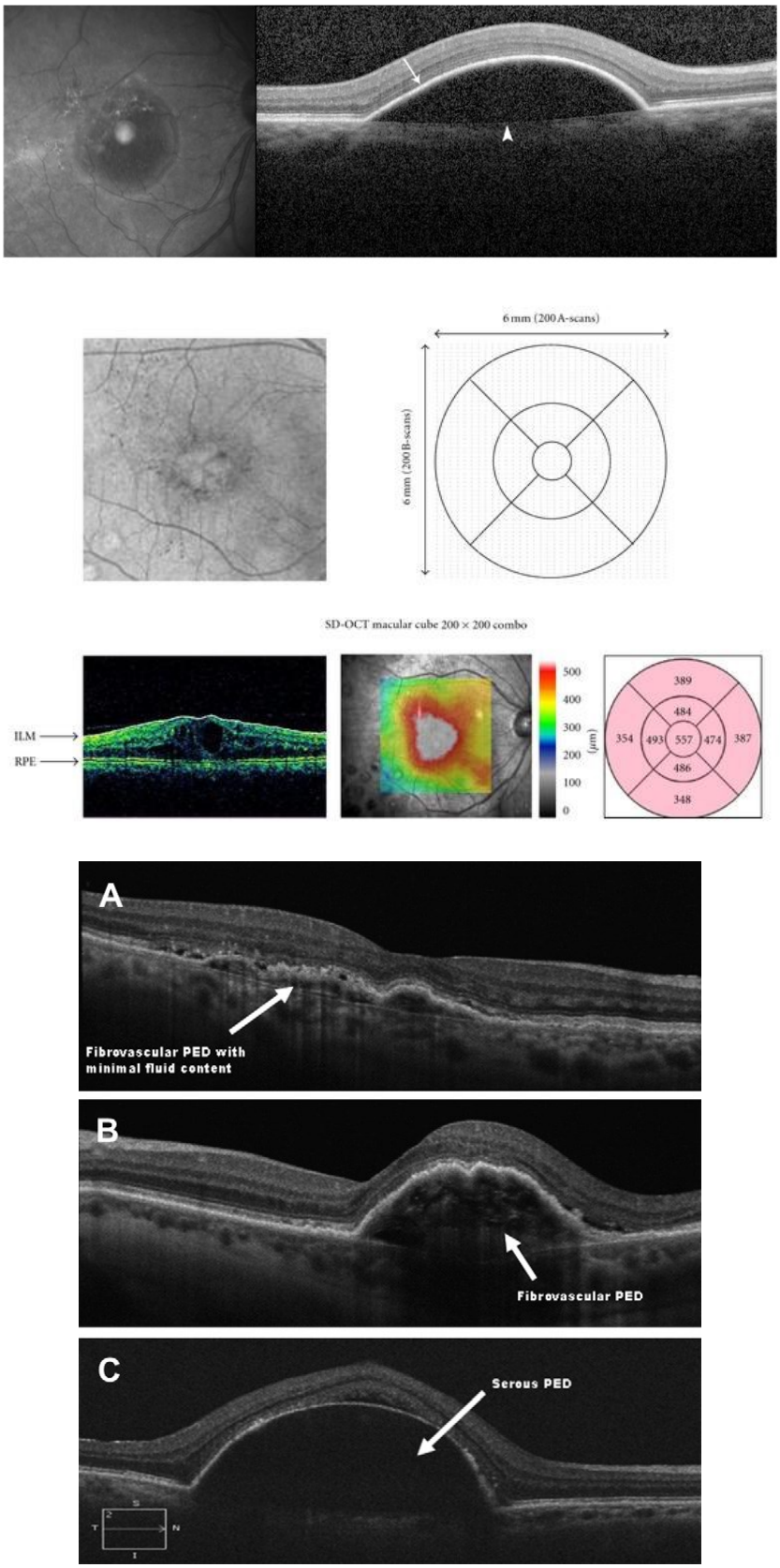

Figure 1: Brain CT scan showing bilateral calcifications involving the caudate and lenticular nuclei consistent with Fahr syndrome.

4. DISCUSSION

Polypoidal choroidal vasculopathy represents a distinct clinical entity within the spectrum of neovascular macular diseases [3-4-5].

Risk factors include:

- advanced age
- systemic vascular diseases such as hypertension

OCT plays an important role in detecting characteristic features including [6-7]:

- pigment epithelial detachment
- subretinal fluid
- irregular RPE elevation.

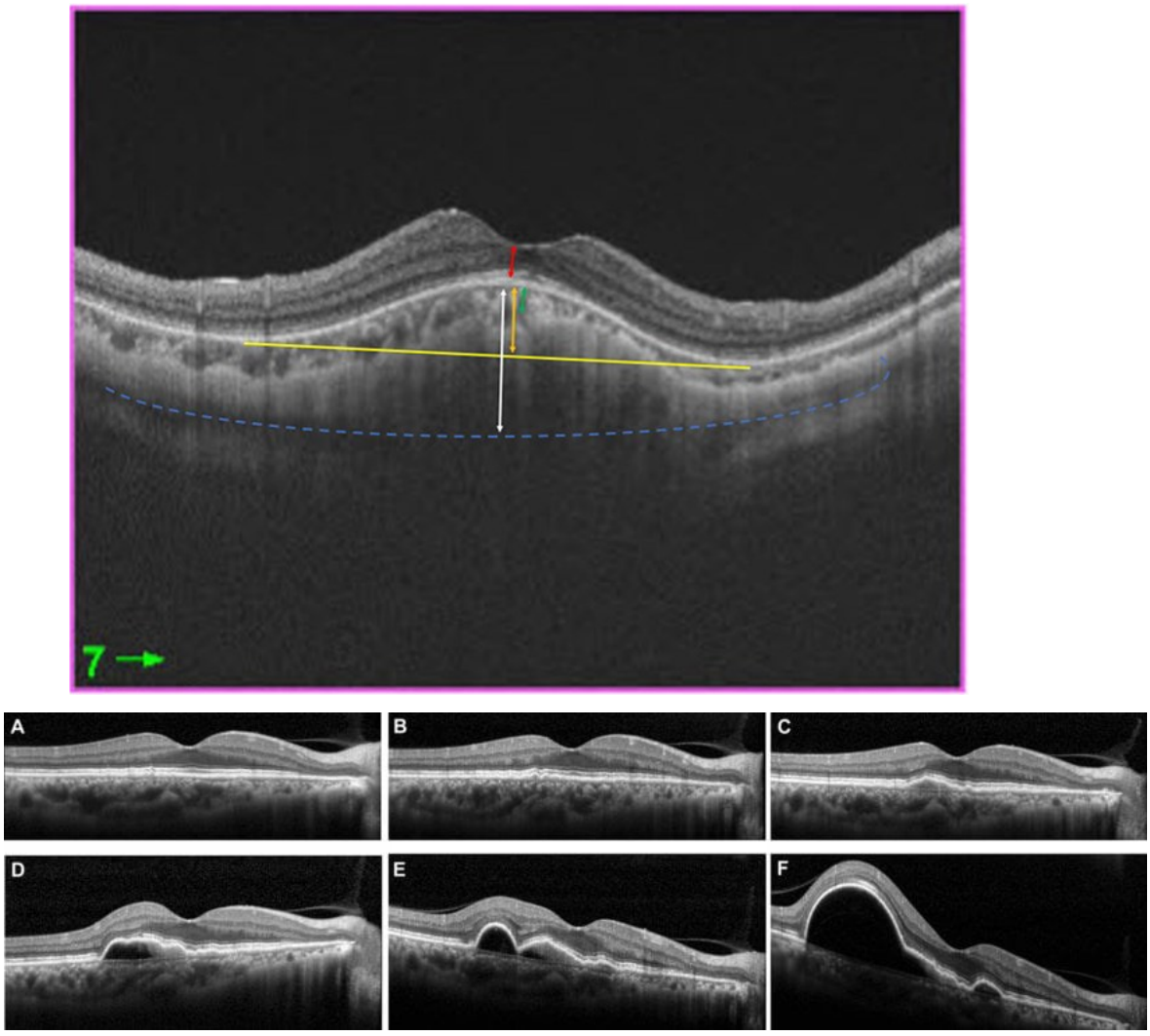

Figure 2: High-definition OCT radial scans showing irregular elevation of the retinal pigment epithelium and dome-shaped PED, suggestive of polypoidal choroidal vasculopathy.

Although indocyanine green angiography remains the gold standard for detecting polypoidal lesions, fluorescein angiography is useful for demonstrating associated neovascular leakage [8-9-10].

The main treatment options include:

- intravitreal anti-VEGF injections
- photodynamic therapy
- combination therapy in selected cases.

Early treatment is essential to preserve visual function.

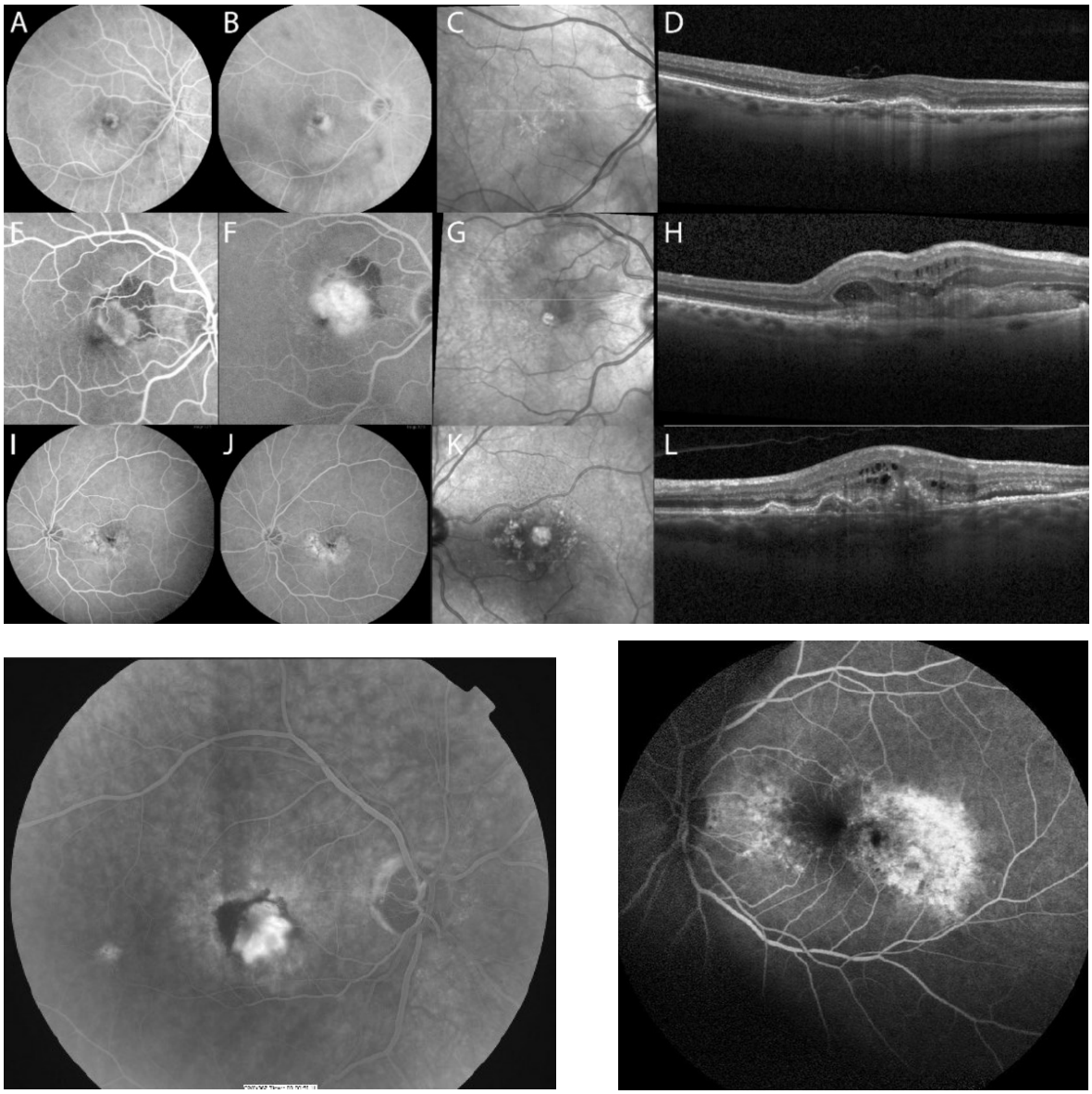

Figure 3: Fluorescein angiography showing progressive hyperfluorescence with late leakage, consistent with choroidal neovascularization

5. CONCLUSION

Polypoidal choroidal vasculopathy represents a significant cause of visual impairment in elderly patients and should be considered in cases of progressive visual decline, particularly in the presence of macular abnormalities. This case illustrates how clinical examination alone may be insufficient to establish an accurate diagnosis. Multimodal retinal imaging, especially optical coherence tomography (OCT) and fluorescein angiography, is essential not only for confirming the diagnosis but also for detecting associated neovascular activity and guiding therapeutic decisions. Early identification and appropriate management based on imaging findings are crucial to prevent further visual deterioration and improve patient outcomes.

ETHICAL CONSIDERATION

This study was conducted in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and the Helsinki Declaration of 1975, as revised in 2000. The authors declare that they have obtained the necessary authorizations for publication.

CONFLICTS OF INTEREST

All authors declare that they have no conflicts of interest.

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AI DECLRATION

The authors declare that generative AI tools were used solely for language correction, editing, and formatting.

All outputs generated by automated tools were carefully reviewed and validated by the authors, who take full responsibility for the manuscript's accuracy and integrity.

REFERENCES

[1] S Yannuzzi, L. A., Sorenson, J., Spaide, R. F., & Lipson, B. (2012). Idiopathic polypoidal choroidal vasculopathy (IPCV). Retina, 32, 1-8.

[2] Ciardella, A. P., Donsoff, I. M., Huang, S. J., Costa, D. L., & Yannuzzi, L. A. (2004). Polypoidal choroidal vasculopathy. Survey of ophthalmology, 49(1), 25-37.

[3] Wong, T., Chakravarthy, U., Klein, R., Mitchell, P., Zlateva, G., Buggage, R., ... & Sledge, I. (2008). The natural history and prognosis of neovascular age-related macular degeneration: a systematic review of the literature and meta-analysis. Ophthalmology, 115(1), 116-126.

[4] Koh, Adrian, et al. "EVEREST study: efficacy and safety of verteporfin photodynamic therapy in combination with ranibizumab or alone versus ranibizumab monotherapy in patients with symptomatic macular polypoidal choroidal vasculopathy." Retina 32.8 (2012): 1453-1464.

[5] Cheung, Chui Ming Gemmy, et al. "Polypoidal choroidal vasculopathy: definition, pathogenesis, diagnosis, and management." Ophthalmology 125.5 (2018): 708-724.

[6] Spaide RF, Yannuzzi LA, Slakter JS, et al. Indocyanine green videoangiography of idiopathic polypoidal

choroidal vasculopathy. Retina. 1995;15(2):100–110.
[7] Laude, Augustinus, et al. "Polypoidal choroidal vasculopathy and neovascular age-related macular degeneration: same or different disease?." Progress in retinal and eye research 29.1 (2010): 19-29.
[8] Lim, T. H., A. Laude, and C. S. H. Tan. "Polypoidal choroidal vasculopathy: an angiographic discussion." Eye 24.3 (2010): 483-490.
[9] Gomi, F., & Tano, Y. (2008). Polypoidal choroidal vasculopathy and treatments. Current opinion in ophthalmology, 19(3), 208-212.
[10] Baek, J., Lee, J. H., Jeon, S., & Lee, W. K. (2019). Choroidal morphology and short-term outcomes of combination photodynamic therapy in polypoidal choroidal vasculopathy. Eye, 33(3), 419-427.