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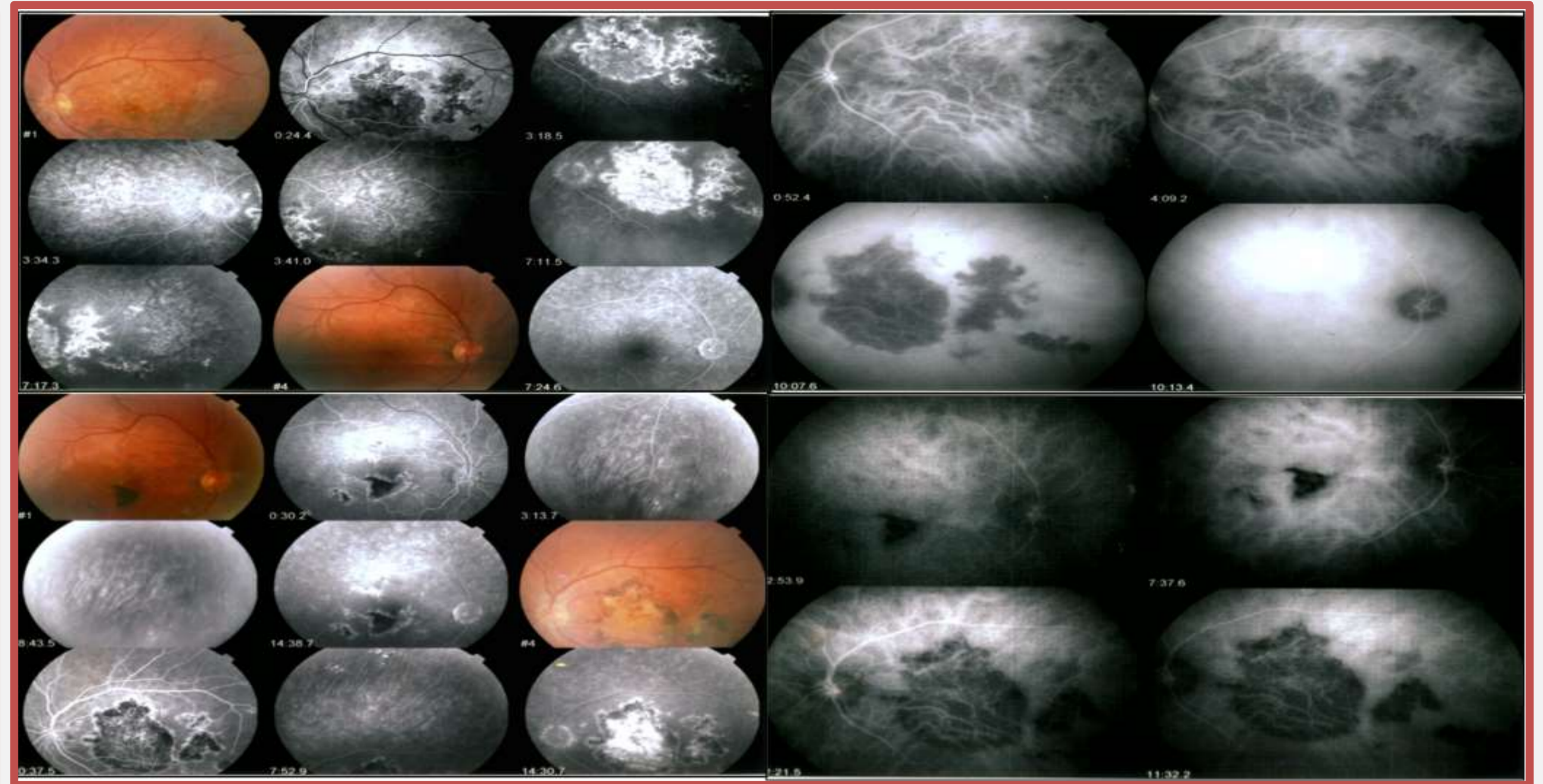
Background: Ocular tuberculosis is a challenging clinical entity, presenting hurdles in diagnosis and management, for ophthalmologists and every kind of specialists. Early diagnosis and prompt treatment may be sight-saving in patients with ocular TB. However, diagnostic obstacles present the greatest limitations in understanding and treating ocular TB

Patients & Methods:

	Case 1	Case 2
Nationality	italian	International adopted child (southeast asia)
Age	18	7
Gender	male	male
TBC manifestation	negative	Progress latent TBC
PPD	negative	Positive > 15 mm
Quantiferon TB gold	negative	-
Eyes involvement	bilateral	bilateral
Macular involvement	R.E. NO L.E. YES	R.E. YES R.E. YES
Instrumental examinations	Retinography, FAG, OCT	Retinography, FAG, OCT
Therapy	standard four-drugs anti-tubercular therapy (isoniazid, Rifampicin, Ethambutol and Pyrazinamide)	standard four-drugs anti-tubercular therapy (isoniazid, Rifampicin, Ethambutol and Pyrazinamide)

Case 1:

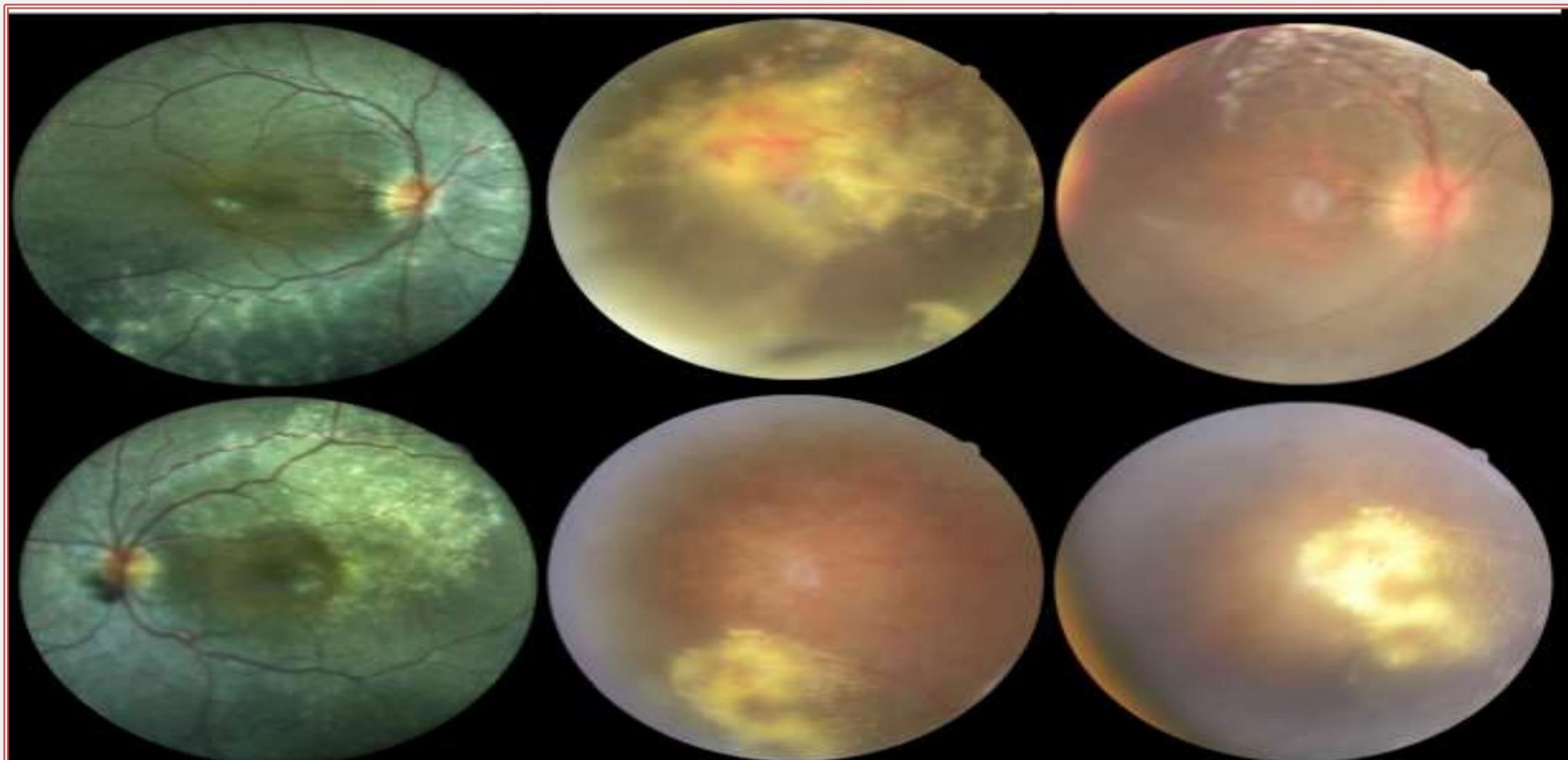
The young boy went to an ophthalmologist in September 2015, complaining of blurred and decreased vision in left eye. The patient was diagnosed to have choroiditis in left eye and he was treated with oral corticosteroids. But after an early favorable response, in about two months, the lesions involved the controlateral eye. He attended to our ophthalmological consultation in November 2015: best-corrected visual acuity (BCVA) was 20/20 in RE and 20/70 in LE. Funduscopy revealed signs of serpiginoid choroiditis in both eyes with macular involvement in LE. Laboratory investigations for etiology of choroiditis were negative. Tubercoline skin test was negative so Quantiferon TB gold. Fluorescein angiography showed the presence of a wide chorioretinal atrophic area with signs of activity in the outer edges.



L.E. irregular area at the posterior pole involving 2/3 of the central retina. In the context Hypo and Hyperfluorescence and irregular diffusion of the dye in the outermost edge of temporal side of lesion at FAG. The lesion appears Hypofluorescent at ICGA. R.E.: Lack of significant changes at FAG and ICGA.

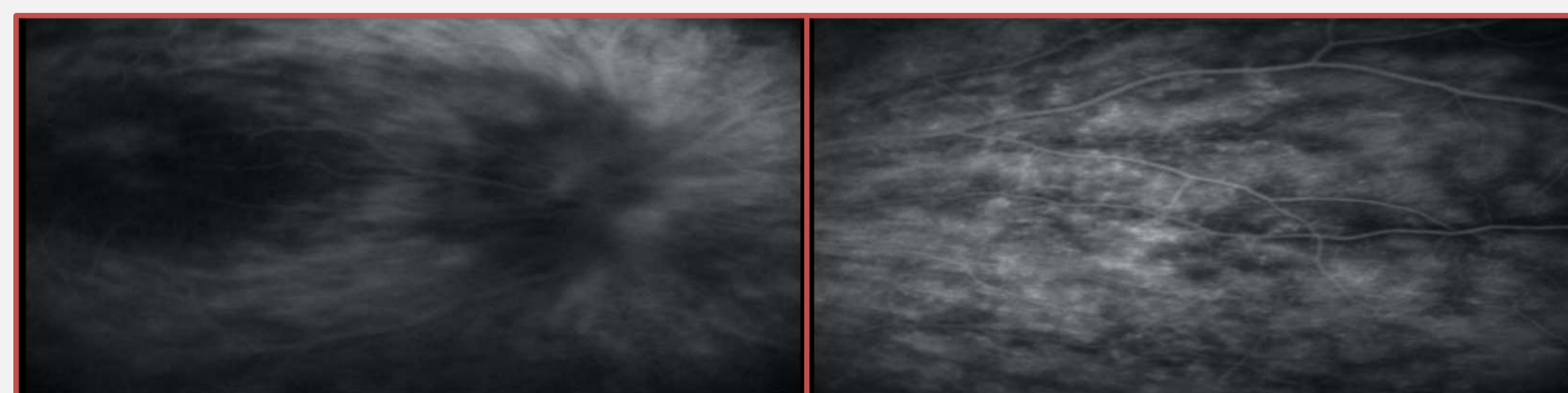
Retinography:

bilateral choroiditis and massive retinal exudation at midperipheral retina in the temporal sector. arterios perivascolar sheathing and localized vascular arterios narrowing in the posterior pole along the vascular arcades were present



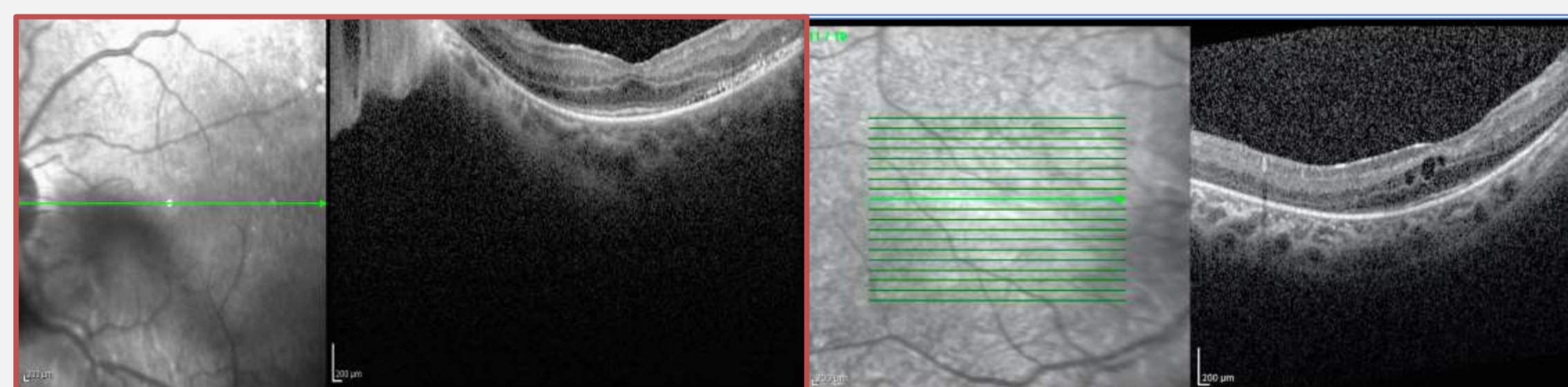
Fluorangiography:

bilateral irregular and slight hyperfluorescence at the optic disc and along the temporal vascular arcades. Peripheral arborescent hypofluorescent areas near arteriolar structures as hipoperfused zones and moderate and diffuse venular hyperfluorescence signs of retinal vasculitis



OCT

increased thickness of inner limiting membrane and intra retinal cysties in macular region. in the choroid hyper-reflective dots at posterior pole as sign of active choroiditis were evident



Case 2:

A seven years old boy was seen at our department for the first time, in march 2017 for a progressive bilateral visual impairment. The boy was treated for latent TBC two years before in 2015 with A.T.T. for four months with a combination of rifampicin /isoniazid. In march 2017 respiratory investigations including sputum analysis and chest x ray were negative. tst (mantoux) was positive with an induration of more than 15 mm. The boy showed nystagmus and visual impairment with values of best corrected visual acuity of 0.1 in right eye and 0.2 in left eye. There were no signs of anterior chamber inflammation while there were a vitreous haze and presence of vitreous cells, demonstrating an inflammatory involvement of the posterior segment. the diagnosis of presumed TB uveitis was made considering the following criteria:

- 1) the clinical pattern of the uveitis compatible with tb,
- 2) the positive tuberculosis skin test (mantoux) with an induration of more than 15mm
- 3) the exclusion of other uveitic entities.

Therapy and Outcome:

Case 1) Do to the clinical picture and to the poor response to corticosteroids, also in absence of other diagnostic criteria we considered the diagnosis of TB choroiditis and started standard four-drugs anti-tubercular therapy with good fast healing response and recovery of visual acuity in left eye to 20/25.

Case 2) due to the severe and bilateral intense inflammatory involvement of the posterior segment, a standard drug treatment for active tbc (isoniazid, rifampin, ethambutol and pyrazinamide) in combination with a steroid treatment tapered over 6-8 weeks was started. in the last ophthalmological examination in june 2017 after 3 months of treatment the child showed a clinical improvement: he didn't suffer from nystagmus anymore, a bilateral improvement of visual acuity values of about 0,2 snellen lines in both eyes was observed, vitreous haze and macular cysts at oct examination disappeared.

Conclusions:

TB uveitis is difficult to diagnose since most patients have no clinical signs of active or latent extraocular TB, and common investigations contribute very little to TB confirmation, leading to potential misdiagnosis. Even nowadays Consensus is lacking to date among uveitis specialists for the diagnostic management of ocular TB, which has yet to be clarified. In low endemic areas, TB ocular inflammation remains mainly presumptive, since direct bacteriological assessment is exceptional, and radiological abnormalities are rarely present. For all this reasons Clinical diagnosis is mandatory in absence of laboratory findings in TB uveitis