Patients presenting with an acute post-cataract endophthalmitis were included in this observational and multicenter study (FRENCH Institutional ENDophthalmitis Study group) from January 2008 to December 2013. A Time Domain (TD, Stratus™; Carl Zeiss Meditec, Inc.) or a Spectral Domain (SD, Spectralis; Heidelberg Engineering™, Heidelberg, Germany; Cirrus™; Carl Zeiss Meditec, Inc.) OCT was performed at each visit. Each patient was followed using the same OCT machine over 12 months (25 with SD-OCT and 21 with TD-OCT). Cirrus measurement was defined as the reference measurement, and we used the conversion table to convert stratus (Cirrus = Stratus x 0.8 + 36.4) into cirrus CMT (Giari A, Cigada M, Choudhry N, et al. Reproducibility of retinal thickness measurements on normal and pathologic eyes by different optical coherence tomography instruments. Am J Ophthalmol 2010;150(6):815-24).

Results

- **46 patients** with a regular follow-up at month 3, 6 and 12 (M3,M6,M12) were included in the OCT analysis.

- **Epiretinal membrane** (ERM) prevalence has increased from 26% at M3 to 39% at M12. Eyes with an ERM exhibited increased central macular thickness (p=0.001) and lower visual acuity (VA) (Mean LogMAR: 0.4 ± 0.4 versus 0.12 ± 0.2, p=0.02) at M12 in comparison to the group with normal macula. There was a significant association between ERM and the alteration of the ellipsoid band (p=0.02), and the external limiting membrane (ELM, p=0.07) at M12.

- **Vitreomacular traction** (VMT) prevalence decreased from 12% at M3 to 6% at M12.

- **Non-tractional macular edema** (ME) prevalence varied between 7% and 13%, and was associated with capsular rupture at the time of the cataract extraction. (p=0.03)

- **Macular Thinning** remained stable at 10%

Conclusions

Most patients with macular edema were diagnosed at the M3 visit, whereas there was an increase in the prevalence of ERM over time. Epiretinal membrane and macular edema are the main OCT abnormalities diagnosed after one year of follow-up with a final VA ≥ 20/40 in 50% of the patients. Ultrastructural abnormalities of the ELM and EZ were frequently observed in these patients.