Purpose: To evaluate macular choroidal thickness in patients with unilateral branch retinal vein occlusion (BRVO) using enhanced depth imaging (EDI) spectral domain optical coherence tomography (SD-OCT).

Material and Methods: Prospective study which included 34 eyes of 17 patients with unilateral BRVO (mean age 68.6 ± 11.2 years). Statistical analysis was performed to compare BRVO with fellow eyes. Comparison was also done between choroidal thickness and central retinal macular thickness and disease evolution time. Choroidal thickness was measured manually in 3 regions (subfoveal, 750μm nasal and 750μm temporal to the fovea) in the 15°x5° area central to the fovea using EDI SD-OCT.

Results: The average choroidal thickness in the 17 eyes with BRVO was 211.8 ± 55.97μm, which was superior to the average choroidal thickness in the 17 fellow eyes (185.7 ± 46.1μm), with this difference being statistically significant (p=0.019). A positive correlation was found between choroidal thickness and central retinal macular thickness (r=0.6). A relationship between disease evolution time and choroidal thickness in BRVO eyes was not demonstrated.

Conclusions: Choroidal thickness can be evaluated with the use of EDI SD-OCT. As demonstrated in the only report published on choroidal thickness in central retinal vein occlusion, macular choroidal thickness in BRVO eyes was significantly greater than that of fellow eyes. Choroid may play a role in the pathophysiology of this disease.