Long-term change of subfoveal choroidal thickness in Behçet’s disease patients with posterior uveitis

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Purpose: To evaluate the long-term subfoveal choroidal thickness (SCT) changes measured by enhanced depth imaging optical coherence tomography (EDI-OCT) in Behçet’s disease (BD) patients with posterior uveitis and to identify clinical factors associated with SCT change.

Design: Retrospective comparative study

Methods: Sixty-three eyes of 63 BD patients with posterior uveitis (uveitis group) were enrolled. Changes in SCT were assessed using EDI-OCT images taken during quiescent phase of inflammation over a study period of longer than 24 months. The SCT change rates were compared with 25 BD patients (25 eyes) without ocular involvement (non-uveitis group) and 63 age- and sex-matched normal healthy controls (control group). Also, clinical factors associated with SCT change were investigated in the uveitis group using linear regression analysis.

Results: In this comparative study, baseline characteristics showed no difference among the groups, but at final EDI-OCT, uveitis group showed poorer visual acuity (P=0.005) and smaller SCT (P=0.025) than other groups. The mean SCT in uveitis group significantly decreased from 290.3±71.5 to 267.6±71.7 μm (P < 0.001) during a mean study period of 38.5 months yielding a mean SCT change rate of -7.1 μm/year, which was different from other groups (-2.3 and -1.8 μm/year for non-uveitis and control group respectively; P < 0.001). Linear regression analysis revealed that SCT decrease was associated with a higher ratio of active inflammation length divided by the length of entire study period (P < 0.001).

Conclusions: In patients with Behçet’s posterior uveitis, choroidal thickness showed decrease over time, which was associated with a length of active inflammation. This finding suggests intraocular inflammation in BD affects the choroid as well as the retina.