Abstract 161

THE IMPACT OF OCT DOUBLE LAYER SIGN CHARACTERISTICS ON LONG TERM VISUAL PROGNOSIS OF PATIENTS WITH NON-EXUDATIVE AGE RELATED MACULAR DEGENERATION

Oral

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Purpose:

To assess the predictive value of optical coherence tomography (OCT) double layer sign (DLS) features on subclinical, non-exudative macular neovascularisation (NE-MNV) and visual prognosis in patients with non-exudative age-related macular degeneration (NE-AMD).

Methods:

48 patients with DLS on OCT who were diagnosed with NE-AMD between 2016-2020 were included. The minimum follow-up was 12 months. The presence of NE-MNV on OCT angiography, the maximum area of the DLS and type 1 MNV on en-face structural OCT, the thickness of the choroid beneath the DLS, and its topographically symmetrical area with respect to the horizontal raphe on EDI-OCT and the maximum base width and height of the DLS were recorded. The relationship between the features of the 'double layer sign' and the presence and exudation rates of NE-MNV during the follow-up period were recorded.

Results:

The mean age was 75.9±7.5 years. The mean follow-up period was 20.9±9.5 months. NE-MNV was detected in 83.3% of the patients and signs of exudation were observed in 30% of these cases. The mean area of 'DLS and MNV were 3.1±3.6 (0.1-13.2) mm2 and 2.9±2.9 (0.4-10.0) mm2 respectively. The thickness of the sub-DLS and topographically symmetrical choroid were 301.4±74.1 μm and 221,9±64,3 μm respectively ($p<0.001$). The base width and height of the DLS were 1895.0±1114.6 μm and 105.5±50.2 μm respectively. The mean area and base width of the 'DLS were significantly correlated with the presence exudation rate of MNV ($p<0.05$).

Conclusions:

A significant correlation of 70-85% has been reported between the type 1 MNV and DLS in AMD cases. Upon the current literature, our study revealed that the base width and the area of the DLS are also significant predictive features to estimate the presence and exudation rate of NE-MNV.