Abstract 20

HIGH RESOLUTION/HIGH SPEED (HR/HS) GAP: A NOVEL QUANTITATIVE METRIC IN OPTICAL COHERENCE TOMOGRAPHY ANGIOGRAPHY

Oral

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Purpose:

Recent advances allow the acquisition of two kinds of OCTA scans: high-resolution (HR) which is slower but with greater detail, and high-speed (HS), faster but with lower resolution. The aim of our study is to assess differences between HR and HS OCTA scans in a healthy cohort of subjects.

Methods:

The following quantitative OCTA parameters were evaluated on HS and HR images: vessel tortuosity (VT), vessel dispersion (VDisp), vessel rarefaction (VR) and choriocapillaris (CC) porosity. Furthermore, we developed a new metric, namely HR/HS overlapping gap, which can quantitatively assess the different amount of blood flow detected by both acquisitions.

Results:

We found HR and HS similar in terms of VD, VDisp and VR values. On the contrary, HR OCTA showed significantly higher VT values and vessel diameter, together with lower CC porosity. HR/HS overlapping gap was at least of 20% for intraretinal capillaries and at least 5% for CC.

Conclusions:

Our data support the reliability of HS OCTA for cases characterized by poor collaboration or fixation issues. We also hypothesize that HR OCTA is able to detect wider range of flow signal with respect to HS OCTA. HR/HS overlapping gap might represent a novel quantitative metric for progression risk stratification.