
Here are the key points of Dr. Spaide’s paper:

• The pattern of flow voids form a scale invariant pattern in the choriocapillaris starting in a size much smaller than a choroidal lobule.

• Age and hypertension affect the choriocapillaris, a flat layer of capillaries that may serve as an observable surrogate for the neural or systemic microvasculature.

• Significant alterations detectable in the flow pattern in eyes with pseudodrusen and in eyes with late AMD in the fellow eye offer diagnostic possibilities and impact theories of disease pathogenesis.
Dr. Spaide’s study had 104 eyes of 80 patients who ranged in age from 24 to 99 years of age (median 71, interquartile range 56.5-77 years). There were 45 (56.3%) females. Of the 80 patients 28 (35%) had a diagnosis of hypertension and 11 (10.6) eyes had pseudodrusen. The median visual acuity was 20/25 (logMAR 0.0969, IQR 20/20-20/30).

The choriocapillaris layer was sampled as a slab 10 microns thick starting 31 um posterior to the retinal pigment epithelium – Bruch’s membrane complex segmentation.

Here are his findings:

1. The distribution of flow voids versus size of the voids was highly skewed.
2. The data showed a linear log-log plot and goodness of fit methods showed the data followed a power law distribution over the relevant range.
3. A slope intercept relationship was also evaluated for the log transform and significant predictors for variables included age, hypertension, pseudodrusen, and the presence of late age-related macular degeneration (AMD) in the fellow eye.
In summary:

1. The pattern of flow voids form a scale invariant pattern in the choriocapillaris starting in a size much smaller than a choroidal lobule.

2. Age and hypertension affect the choriocapillaris, a flat layer of capillaries that may serve as an observable surrogate for the neural or systemic microvasculature.

3. Significant alterations detectable in the flow pattern in eyes with pseudodrusen and in eyes with late AMD in the fellow eye offer diagnostic possibilities and impact theories of disease pathogenesis.