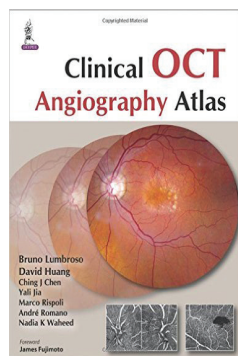


Book Review



Bruno Lumbroso, David Huang, Ching J. Chen, Yali Jia, Marco Rispoli, Andre Romano, Nadia Waheed. 182 pp. Price: £72.00. Publishers: Jaypee Brothers Medical Publishers. Date of Publication: 2015. Place of Publication: India. ISBN-13: 978-9351528999.

Clinical optical coherence tomography (OCT) Angiography Atlas is a comprehensive guide to this new imaging modality in ophthalmology. It is divided into 2 parts. The first covers the technology and interpretation of OCT angiography. This section starts with highlighting the term split-spectrum amplitude decorrelation angiography this novelty is how the OCT signal is processed to enhance flow detection in blood vessel lumen measuring variation in reflected OCT signal amplitude between consecutive cross sectional scans. It compares OCT A with fluorescein angiography as there is no use of dye but it detects vascular abnormalities based on depth and vascular pattern. It discusses the limitations of OCT angiography such as flow projection artifact which can be removed by software processing the fading of OCT flow signal in large vessels due to fringe wash out effect associated with very fast flow. The scan area is relatively small. Large area angiograms can be achieved, but needs higher speed OCT systems not yet available commercially.

It explains how interpretation depends on segmentation into different tissue layers or (slabs) the angiograms combine color coded flow information super imposed on gray-scale reflectance signal. Both blood flow and retinal structure information are presented together this helps clinicians recognize vascular patterns associated with various vascular abnormalities.

The second part, is further divided into 7 sections, which provide a general update on clinical OCT angiography across a range of retinal and choroidal diseases. The clinical applications are subdivided into 2

main categories; inner retinal disorders as retinopathies vascular acquired or congenital

Outer- retinal and choroidal disorders mainly chocooidal neovascular membrane

In chapter 8, chocooidal neovascular membrane in ARMD is discussed showing the advantage of OCT angiography in detecting type 1 CNV often poorly identified by FA aided by segmentation through various retinal slabs. The lack of dye leakage shows the full pattern of the vascular networks through the superficial and deep vascular plexus. The discussion includes polypoidal choroidal vasculopathy. Myopic CNV, and CSCR neovascular membrane missed by other modalities. Follow up of post intravitreal injections in further aided by detecting reopening of CNV vessels, which occur 2 weeks prior to fluid accumulation aiding the planning of more timely injections affecting earlier and more permanent CNV regression.

The chapter on diabetic retinopathy Optical Coherence Tomography Angiography (OCTA) is described as a powerful tool in evaluating the disease. It displays the retinal vasculature in greater detail allowing the identification of enlarged FAZ. Capillary drop out is correlated with FAZ, it visualizes both the superficial and the deep capillary plexus. Through acquiring scans that can be segmented to specific depths such as vitreo-retinal interface to asses neovascularization. There are chapters dedicated to the use of OCTA in cornea and glaucoma.

The final section of the book discusses ongoing research and future developments in technology, particularly ultra high speed swept source technology. The book is enhanced by 251 full color images correlating fluorescein angiography, OCT, and OCT angiography in every discussion of each disease entity the reader gets the full picture from every angle the texts is peppered with clinical, basic science, and pathological details, which gives an extra dimension to the learning experience.

I thoroughly enjoyed reading this book its audience would be mainly retinal specialist, fellows, and opticians interested in this technology.

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