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PURPOSE

Despite the effort to refine the surgical techniques of macular hole surgery, surgical failure is still reported. Secondary closure of the macular hole is possible with techniques that re-approach the previously performed ILM peel.

METHODS

Analyzing the color image of the retina by deconstructing the image into channels (RGB channels) allows a single image to be deconstructed into channels to show the individual wavelength views. Blue channel (BC) increases the visibility of anterior retinal layers, green channel (GC) allows the visualization of the sensory retina and the retinal pigment epithelium (RPE), and red channel (RC) scans the deeper structures from the RPE to the choroid.

RESULTS

In our clinical practice, we observe that BC highlights the area where the ILM peeling was performed. Blue channel is capable of detecting inner retinal alterations and may be clinically useful for monitoring anatomical changes associated with ILM peeling.

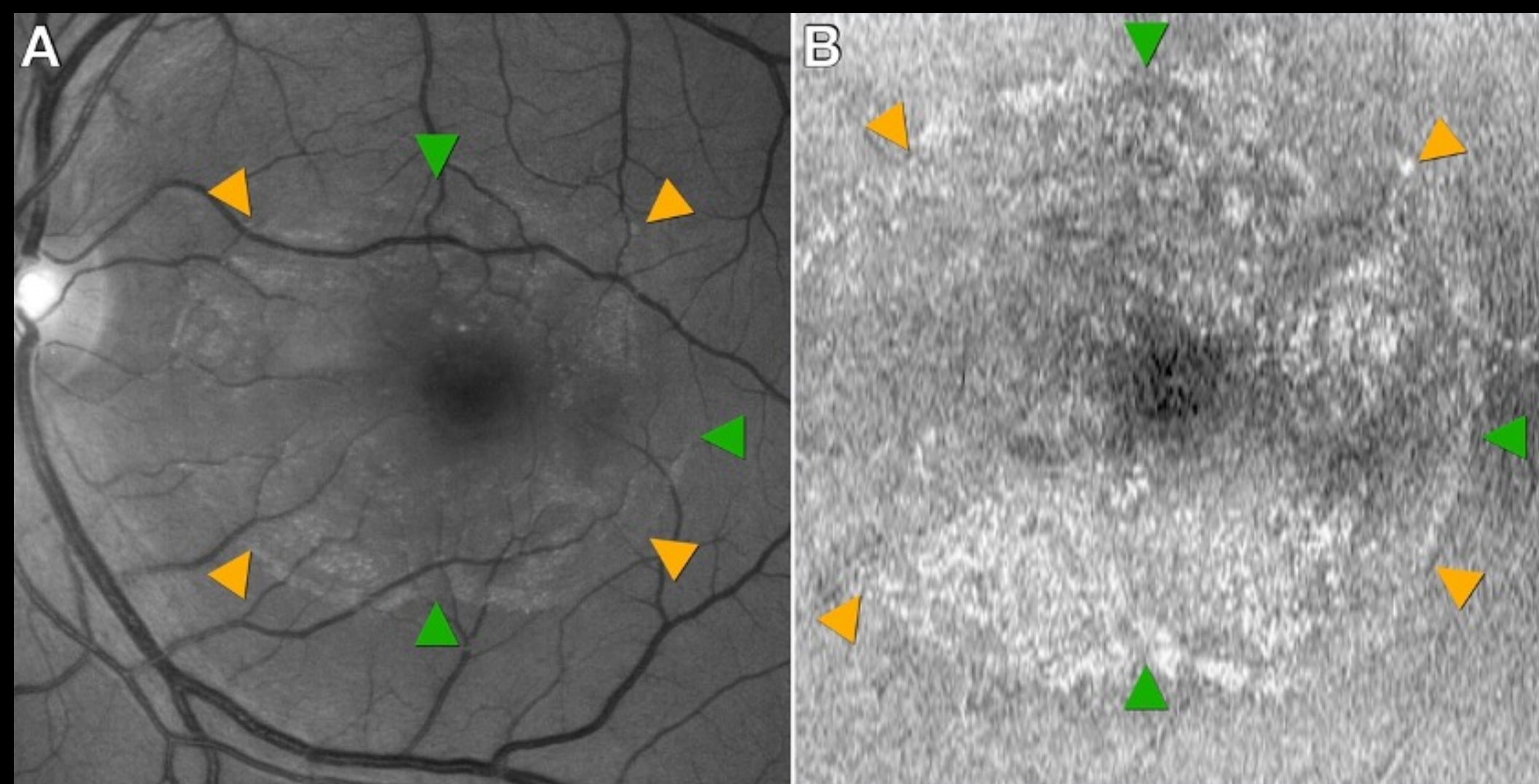


FIGURE 1: Blue channel (A) and en-face OCT of the retina surface (B) two months after pars plana vitrectomy and ILM peeling to treat an idiopathic macular hole. Arrowheads points to the boundaries of the peeled area.

DISCUSSION

The incidence of idiopathic MH that cannot be closed by one surgical procedure varies between 4% and 13%. Secondary MH closure is possible using various surgical techniques. Therefore, a good understanding of how the previous ILM peeling procedure was performed is necessary. Information on the location and extent of residual ILM helps in choosing and planning the best surgical technique.

Splitting RGB channels increases the ability to detect alterations of the different retinal layers, adds valuable information about the retinal findings and enhance the visualization of several retinal conditions.

We did not find in the literature studies that relate the separation of the RGB channels and the analysis of blue channel with macular surgery. Based on this new scenario, in our perspective more studies should be carried out to analyze the blue channel in the postoperative period of macula surgery, and retinal surgeons should be aware of this new data for better decision and planning in possible surgical reintervention.

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