Ciliary Muscle Morphologic Changes with Accommodation and Axial Ametropia

Sheppard et al.1 studied ciliary muscle morphology during accommodation. However, in the Methods section, they specified that the morphologic measurements were judged from the ciliary muscle-sclera boundary to the pigmented ciliary epithelium, which anatomically is the ciliary body. The ciliary muscle is only part of the ciliary body, which also comprises connective tissue, a complex vascular network, and neuronal tissue—components that are clearly defined separately in any histologic preparation. Imaging methods have limited tissue-specific ability, as can be seen in a paper by Silverman et al.2 The distinction between the ciliary muscle and the ciliary body is not a semantic issue. Functionally, the ciliary muscle counteracts with the connective tissue around it, and the net effect defines the ciliary body’s morphologic changes, the zonular tension, and the crystalline lens position and curvature. The paper therefore provides data on the morphologic changes in the ciliary body during accommodation, whereas the changes in its subcomponents cannot be analyzed on the basis of the acquired data.

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References


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