Letter

Re; Fibrous Connective Tissue between Müller's Muscle and the Palpebral Conjunctiva as a Reinforcement Structure and a Natural Barrier for the Upper Eyelid

By

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Our article entitled, “Fibrous Connective Tissue between Müller's Muscle and the Palpebral Conjunctiva as a Reinforcement Structure and a Natural Barrier for the Upper Eyelid” was recently published in *Okajimas Folia Anatomica Japonica*¹⁾. In that article, we stated that the fibrous connective tissue between Müller's muscle and the palpebral conjunctiva continues from the intermuscular transverse ligament (ITL)^{2,3)}.

We did not state then the relationship between the fibrous connective tissue and the lamina propria mucosae. Although a lot of vessels are usually included in the lamina propria mucosae⁴⁾, the present fibrous connective tissue also included a lot of vessels. In this respect, we can say that this fibrous connective tissue is just the lamina propria mucosae; however, since the fibrous connective tissue continues from the ITL¹⁾, part of which pulls the upper conjunctival fornix as a supporting structure, we can also say that the fibrous connective tissue

acts as the support mechanism for the upper eyelids apart from its natural barrier function as the lamina propria mucosae. In this respect, it is in general different from the lamina propria mucosae.

References

- 1) Kakizaki H, Zako M, Nakano T, *et al.* Fibrous Connective Tissue between Müller's Muscle and the Palpebral Conjunctiva as a Reinforcement Structure and a Natural Barrier for the Upper Eyelid. *Okajimas Folia Anat Jpn* 2005; **82**:79–82.
- 2) Lukas JR, Priglinger S, Denk M, *et al.* Two fibromuscular transverse ligaments related to the levator palpebrae superioris: Whitnall's ligament and an intermuscular transverse ligament. *Anat Rec* 1996; **246**:415–422.
- 3) Ettl A, Priglinger S, Kramer J, *et al.* Functional anatomy of the levator palpebrae superioris muscle and its connective tissue system. *Br J Ophthalmol* 1996; **80**:702–707.
- 4) Yamada Y. *Histology* (2nd). Tokyo, Kanehara & Co., Ltd. 1991; 231.

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