〈原　著〉

毛周期に伴う毛器官の血管構築の変化

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The Changes in Microvascular Architecture of Hair Follicles during Hair Cycle

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Abstract

We have demonstrated the changes in microvascular architecture of rat hair follicle during hair cycle by scanning electron microscopy. The anagen hair follicle was surrounded by the basket-like network of capillaries at its lower part. Below the tip of the telogen hair follicle, there was a collapsed network of capillaries. Transmission electron microscopy has shown that the capillaries around the anagen hair follicle possessed many fenestrations, while those of the collapsed network locating below the tip of the telogen hair follicle possessed virtually no fenestrations. Our results indicate that the basket-like network of capillaries around the lower part of the anagen hair follicle collapses with the involution of the follicle during telogen, and in turn develops with a new follicular downgrowth to form the basket-like capillary network of the anagen follicle. In addition, we have found that a developed capillary network existed within the vibrissa hair papilla, whereas no visible capillary network existed within the dorsal hair papilla. This indicates that the development of capillary network within the hair papilla may be in proportion to the size of the hair papilla.

Key words: microvascular architecture, hair follicle, hair cycle, hair papilla, scanning electron microscopy.