ABSTRACT

We have three-dimensionally reconstructed the lymphatic architecture of the rabbit tongue using a computer graphic three-dimensional reconstruction method together with histochemically stained serial cryo-sections.

Three collecting lymphatic vessels lying in an anteroposterior orientation were identified in the tongue body. A superior longitudinal muscle accompanying collecting lymphatic (SLCL) that lies in the border between superior longitudinal muscle and transverse muscle was identified in this study, in addition to collecting lymphatics in the lingual septum (LSCL) and deep lingual artery accompanying collecting lymphatics (DLCL) that we reported previously. The vertical muscle accompanying collecting lymphatics (VCL) and the transverse muscle accompanying collecting lymphatics (TCL) were also identified as collecting lymphatics that joined the above three collecting lymphatics.

Specific regional lymph flow was identified for each collecting lymphatic. A transverse right/left cross flow was identified for the LSCL, while the SLCL served the upper 1/3 of the tongue and the DLCL served the lower 2/3 of the tongue. Each collecting lymphatic that accompanied the internal lingual muscles joined to the SLCL, DLCL and LSCL, and were derived from blind-ended lymphatic capillaries that ran in the endomysium. Internal lingual muscle accompanying collecting lymphatics joined each other in the endomysium, and their blind-ended lymphatic capillaries had no branches.