学位論文審査結果の要旨

所　属	乙　三重大学医学部（形成外科学）	氏　名	石浦（いしうら）　良平（りょうへい）
審　査　委　員	主　査　今中　恭子 副　査　問山　裕二 副　査　中川　勇人		

（学位論文審査結果の要旨）

Lymphaticovenular anastomoses training model for multiple stages of lymphedema by using efferent lymphatic plexus of the mesenteric lymph node of rats

【主論文審査結果の要旨】

著者らは論文において下記の内容を述べている。

Introduction: Lymphaticovenular anastomosis (LVA) has transformed lymphedema treatment and has become an important part of the surgical therapy. LVA requires supermicrosurgical skills and unique nontraumatic techniques as the lymphatic vessel diameter of varies with the progression of lymphedema from 0.3 to 0.8 mm. However, even though several supermicrosurgical vessel anastomosis training models have been reported, only few focus on LVA including both various sizes of lymphatic vessels and lymphatic dissection. We report the establishment of a novel in-vivo LVA training model using the rat efferent lymphatic plexus of the mesenteric lymph node.

Materials and methods: Lymphatic vessels in the efferent lymphatic plexus of the mesenteric lymph node and mesenteric veins of 10 male Wistar rats, 572-850 g, were used for LVA in an intima-to-intima coaptation manner using 12-0 nylon suture with 4-6 stitches in an end-to-end fashion. Postoperative patency was evaluated with indigo carmine blue after completion of anastomosis. Diameters of lymphatic vessels in the plexus and recipient veins were measured.

Results: The diameters of lymphatic vessels in efferent lymphatic plexus of the mesenteric lymph nodes and mesenteric veins used as recipients were measured in all 10 male rats. The mean number of lymphatic vessels included in efferent lymphatic plexus of the mesenteric lymph nodes was 7.5 (range, 5-11) and the mean diameter of the lymphatic vessels was 0.34 mm (range, 0.1-1.2 mm). The mean diameter of lymphatic vessels used for LVA was 0.46 mm (range, 0.25-0.7 mm). The mean diameter of the recipient veins was 0.49 mm (range, 0.35-0.7 mm). The postoperative patency rate after LVA was 100% (10/10).

Conclusion: We reported the establishment of LVA model involving the use of the efferent lymphatic plexus of the mesenteric lymph node and mesenteric veins in rats.

ラット腸間膜リンパ節における輸出リンパ管叢を用いたリンパ浮腫進行度に合わせたLVAトレーニングモデルを開発した論文であり、学術上極めて有益であり、学位論文として価値あるものと認めた。

Microsurgery. 2023 43(3):261-265.
Published: 16 November 2022
doi: 10.1002/micr.30986

Ryohei Ishiura MD | Kohei Mitsui MD | Chihena Hansini Banda MD | Kanako Danno MD | Mitsunaga Narushima MD,PhD