Multi-site Lymphaticovenular Bypass using supermicrosurgery technique for Lymphedema Management in lower lymphedema cases

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Background: The impact of lympahtico-venular anastomosis (LVA) on lymphedema has yet to be defined. The purpose of this study is to investigate clinical evidence on the effectiveness of LVA in lower limb lymphedema[1)].

Methods: Eighty-four patients (162 limbs, 73 female and 11 male) with lower limb lymphedema who have undergone multi-site LVA procedure in our clinic between August 2010 to May 2014 were included in this retrospective study. Lymphedema was diagnosed using lymphoscintigraphy and ICG lymphograhy. All LVAs were performed under local anesthesia1). The state of the lymphatic vessels identified during LVA were classified using the NECST Classification[2)]. Limb circumference, subjective symptoms (Pain, abnormal feeling), and frequency of cellulitis were evaluated.

Results: The average age of the patients was 60-years-old (24-94 years old) and the mean post-operative follow-up period was 18.3 months (6-51 months). The postoperative change rate in limb circumference indicated that 67 limbs (47.7%) were classified as "Improvement", 35 limbs (27.3%) were classified as "Stable", and 32 limbs (25%) were classified as "Worse". Post-operative interview revealed improvement in subjective symptoms in 67 limbs (61.5%), no change in 38 limbs (34.9%), and exacerbation in 4 limbs (3.7%). The post-operative mean occurrence of cellulitis was decreased to 0.13 times/year compared with preoperative 0.89, which was statisitically significant ($p=0.00084$). Multiple regression analysis was performed using the post- LVA limb circumference and NECST classification and the following result was confirmed2). Change Rate (%) = $-0.40+(0.30\times N)+(-0.84\times E)+(0.22\times C)+(-0.61\times S)$.

Conclusions: LVA is effective for lower limb lymphedema, in point of limb circumference, subjective symptoms (Pain, abnormal feeling), and the frequency of cellulitis[3)].

Reference;

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Disclosures; None.