

# Electrosclerotherapy as a non-surgical treatment for vulval lymphangioma circumscriptum



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## Our patient

Our patient presented with eight years of labial oedema, vesicles and serous discharge. This caused discomfort, chronic pain and negatively affected mobility and sexual function. She acquired lymphangioma circumscriptum after undergoing a radical hysterectomy, bilateral pelvic lymphadenectomy with adjuvant chemoradiotherapy for cervical carcinoma. Our patient developed bilateral leg lymphoedema, after this she also had bowel obstruction requiring laparotomy and a ventral hernia repair. The lesions had initially been managed with hyfrecation, though this was complicated by vulval cellulitis.

Our patient underwent two bleomycin electrosclerotherapy courses, the first to good effect and the second to treat residuum. The lesions resolved, as did the significant, pain discomfort and serous discharge associated with them. No side effects were experienced and our patient was very satisfied with her treatment.

## Lymphangioma circumscriptum and electrosclerotherapy (EST)

Lymphangioma circumscriptum is a microcystic lesion of lymphatic channels; either congenital or acquired, acquired cases are mostly secondary to treatment of pelvic malignancy (2). Bleomycin electrosclerotherapy has been proven to treat vascular malformations and cancers (3-6). EST uses an electrical pulse delivered by a machine calibrated to cause reversible electroporation, this increases cellular permeability to bleomycin. This technique allows the relatively large molecule of bleomycin to permeate the cell more effectively, resulting dose reduction and decreased in number of treatments (4).

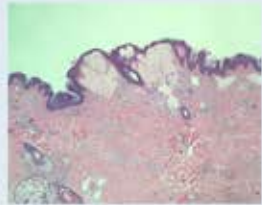
## Results



Image of the lesions prior to treatment which caused significant chronic pain, serous discharge and decreased sexual function.



Image showing resolution of lesions after two courses of bleomycin EST. This nonsurgical approach minimises morbidity and need for reconstruction in a challenging area.



Top: Histological image demonstrating dilated lymphatic channels in the dermis (1).

Above: Schematic demonstrating how electroporation increases intracellular concentration of bleomycin.

Below: Electroporation device with fingertip electrode.



### References:

(1) DermNet, <https://tinyurl.com/yck9p87x>. (2) Chang, M.B. et al (2106). *International Journal of Dermatology* (3) Bertino, G. et al (2022). *Current Oncology*. (4) Kostusiak, M. et al (2022). *Dermatologic Surgery*. (5) Matthiessen, L.W. et al (2018). *Clinical Breast Cancer*. (6) Odil, J. et al (2019). *European Journal of Surgical Oncology*.