INTRODUCTION: Merkel Cell Carcinoma (MCC) is a rare skin tumor that occurs mainly in the head and neck. Skin of the lower limb and hip, despite being the third most frequent localization, are less targeted by literature. The aim of this article is to assess epidemiology and survival outcomes of MCC of lower limb and hip to identify prognostic factors and establish optimal therapeutic strategies.

MATERIALS AND METHODS: The Surveillance, Epidemiology and End Results (SEER) database was searched for all cases of skin MCC between 2000 and 2018. Demographic and clinico-pathological features were compared between lower limb and hip and other skin localizations using T-test or chi-square Test. Overall survival was calculated using the Kaplan-Meyer method and compared among subgroups with log-rank test. Multivariate cox regression was conducted to identify independent predictors of overall survival.

RESULTS: We identified 701 patients with a mean age of 72.8 years, predominantly white (91.1%), 50.5% females. Diagnosis occurred at localized stage (48.6%) with tumour size ranging between 2 and 5 cm in 33.7% of the cases. Surgery with margins over 1cm (standard of care, SOC) was performed in 39.7% of patients. Median overall survival (OS) was 65 months. Older age, positive regional lymph node or presence of metastasis were associated with lower OS (p<0.05). Tumour size inferior or equal to 2cm was associated with better OS (p<0.05). No significant difference in terms of survival was observed in case of SOC surgery with or without radiotherapy. However, SOC surgery with radiotherapy showed better survival than no SOC surgery with radiotherapy (p<0.05). Age, lymph node status, metastasis and treatment were identified as independent prognostic factors.

CONCLUSION: MCC of lower limb and hip is a rare neoplasm impacting the elderly with low OS. Best OS is ensured by the SOC surgery with over 1cm margin, while adjuvant radiotherapy doesn’t impact OS.

Eeva H. Rannikko MD, Ida-Maria Leppäpysto MD, Mervi Laukka MD, Anne Saarikko MD, PhD, Pauliina Hartiala MD, PhD

Department of Plastic and General Surgery, Turku University Hospital, Turku, Finland

Email: ehsulo@utu.fi

INTRODUCTION: Vascularized lymph node transfer surgery (VLNT) can provide benefit to lymphedema patients. Cytokines may play a role in the development of lymphedema and in the regeneration of lymphatic vessels after VLNT. Previous studies have implied that lymphedema could partly be caused by an immunological response towards a Th2 shift (Zampell JC et al. Am J Physiol - Cell Physiol. 2012.; Ristimaki A et al., J Biol Chem. 1998). Our primary aim was to investigate whether the VLNT patients have a specific cytokine profile. Our secondary aim was to see whether the preoperative lymphedema or severity affects the postoperative cytokine response.

MATERIALS AND METHODS: Wound exudate was gathered from 20 patients undergoing VLNT on the first and sixth postoperative day (POD). The concentrations of IL-10, TNF-α, TGF-β1 and VEGF-C were analyzed using enzyme-linked immune-sorbent assays. A general score was generated (from the use of compression garments, transport index (TI) and circumference difference) to assess the benefit of the surgery. The changes in cytokine concentrations (1st POD-6th POD) were correlated with the pre- and postoperative lymphedema related factors (preoperative TI-value, change of TI-value during follow-up, preoperative circumference difference, change of circumference difference during follow-up, duration of preoperative lymphedema, age at operation and cellulitis incidence).

RESULTS: A shorter duration of lymphedema preoperatively correlated with an increase in the concentrations of IL-10 and TNF-α during the first six PODs (IL-10: r=0.506, p=0.032; TNF-α: r=0.728, p=0.003) and a decrease in the concentration of TGF-β1 (r=-0.536, p=0.032). Statistically significant correlations between operation outcome and cytokine levels were not observed.

CONCLUSION: The patients with a shorter duration of lymphedema preoperatively had a more favorable cytokine response during the first six PODs after VLNT. Further research is needed, but these results emphasize the importance of patient selection in the VLNT surgery.