

Head and Neck Lymphedema after Radiotherapy - Prevalence, Changes and Associated Factors - a Prospective Observational Cohort Study

Agneta Hagren¹, Johanna Sjövall¹, Christina Brogårdh¹, Karin Johansson¹, Eva Ekvall Hansson¹

¹ Lunds universitet

Background

There is an increasing incidence of oropharyngeal squamous cell carcinoma (OPSCC) survivors living with treatment-related head and neck lymphedema (HNL). This study aimed to determine (i) the prevalence of external HNL, (ii) changes in HNL over a nine-month period post treatment, and (iii) factors associated with HNL among patients with OPSCC treated with (chemo)radiotherapy.

Material and Methods

Fifty patients were recruited, with a mean age of 64 years, where two thirds were male. HNL was assessed with a lymph scanner in seven facial points, and with a measuring tape at three levels, before treatment, and three- and nine-months post-treatment. Paired sample t-test was used to calculate changes in HNL and logistic regression analysis identified factors associated with HNL.

Results

At three months, 80% of patients had HNL, which decreased to 69% at nine months. The submental point was the most common location for HNL and showed the greatest change over the nine-month period. Differences in circumferential measurement between baseline and follow-ups were small. Low physical activity increased the odds of having HNL ($p=0.011$).

Conclusions

HNL is a common side effect after (chemo)radiotherapy treatment. The changes in HNL at the submental point seem to be greatest while the changes in neck circumferential are small. A lymph scanner detects more cases of HNL than a measuring tape and can therefore be recommended in clinical practice. Since a low level of physical activity increased the risk of having HNL, it may be important to encourage physical activity.