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LICHEN SCLEROSUS AND LICHEN PLANUS IN WOMEN

INCIDENCE, RISK OF CANCER AND CAUSES OF DEATH

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ABSTRACT

Lichen sclerosus (LS) and lichen planus (LP) are dermatological diseases with similarities and differences. Both inflame the stratified squamous epithelial sites of the body, LS preferring the genitalia and LP the oral cavity and extragenital skin. The diseases are usually symptomatic – painful or itchy or both – and chronic with a capacity to cause complications and decrease the quality of life (QoL). LS diagnosis is usually straightforward, whereas that of LP can be tricky. Good symptomatic control is achieved with treatment, but the recommendations for long-term maintenance treatment and follow-up are ambiguous. Reports of cancers in LS and LP patients are scattered throughout the medical literature, but the associations remain unconfirmed. The effects of lichen on mortality are unknown.

The lack of large-scale epidemiological studies of LS and LP motivated this thesis. Finnish nationwide registries are the source of the data for the studies. Two cohorts – one with 7 800 women with LS and the other with 13 400 women with LP – were used to assess the incidence of lichen, associated cancer risk, and mortality following a lichen diagnosis made in the specialized health care.

LP was more common than LS in women: The incidence rates were 28 and 19/100 000 between 2003 and 2012. The incidence of LP stayed constant throughout the study period, but the incidence of LS rose from 14 in 2003 to 22/100 000 in 2012. Both lichens are mainly diagnosed in postmenopausal women with maximum incidence rates between 65 and 69 years for LP (64/100 000) and between 75 and 79 years for LS (53/100 000). A small peak in incidence of LS was observed in 5- to 9-year-old girls.

Women with an LP diagnosis had an increased risk of cancers of the lip (standardized incidence ratio (SIR) 5.17, 95% confidence interval (CI) 3.06-8.16), tongue (SIR 12.4, 95% CI 9.45-16.0), oral cavity (SIR 7.97, 95% CI 6.79-9.24), larynx (SIR 3.47, 95% CI 1.13-8.10), esophagus (SIR 1.95, 95% CI 1.17-3.04), and vulva (SIR 1.99, 95% CI 1.18-3.13). Women with LS were at increased risk of cancers of the vulva (SIR 33.6, 95% CI 28.9-38.6) and vagina (SIR 3.69, 95% CI 1.01-9.44), whereas the risk of cancer of the cervix was reduced (SIR 0.00, 95% CI 0.00-0.70). The observed cancer risks reflect the different predilection sites of the lichens and confirm the associations between LS and LP and cancers.

Women with an LS diagnosis had reduced mortality when compared to the population (standardized mortality ratio (SMR) 0.84, 95% CI 0.78-0.90). In contrast, the mortality of LP women was increased (SMR 1.07, 95% CI 1.02-1.11), with excess mortality from diseases of many organ systems (respiratory diseases (SMR 1.31, 95% CI 1.07-1.57), digestive diseases (SMR 1.39, 95% CI 1.09-1.75), infections (SMR 1.78, 95% CI 1.14-2.64)), and cancers (mouth cancer (SMR 6.50, 95% CI 4.32-9.39), Hodgkin lymphoma (SMR 6.37, 95% CI 1.83-17.2), non-Hodgkin lymphoma (SMR 1.68, 95% CI 1.11-2.44)). A systemic inflammation involvement could, in theory, explain this finding.

Based on this thesis, an increased risk of cancers in women with LS and LP is confirmed. Both lichens are fairly common diseases presenting to many different specialties. Knowledge of the diseases' effects outside the treating physician's own specialty should be increased, especially for LP, given the increased patient mortality. Women with LP could benefit from care by multidisciplinary teams.

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