Lichen sclerosus (LS) is a chronic inflammatory skin disease presenting mainly on the anogenital area. The prevalence of LS has been estimated as 1:300 to 1:900, and even higher in elderly women (1, 2). The lifetime risk of female patients with LS developing vulvar squamous cell carcinoma (SCC) is 4–5% (1).

Vulvar melanoma is rare, with an incidence of 0.10–0.13 per 100,000 individuals, presenting typically in post-menopausal women (3, 4). In Finland, the incidence of vulvar melanoma between years 2010 and 2014 was 0.08–0.12 per 100,000 individuals (The Finnish Cancer Registry: data upon request), which is in line with other vulvar melanoma incidence studies. Reports on vulvar melanoma among patients with LS are few. So far, 4 cases have been described among adult patients and 6 cases in prepubertal girls (3, 5, 6). The aim of this study was to clarify the possible connection between LS and vulvar melanoma.

METHODS

A data search identifying female patients with reported SNOMED Clinical Terms for LS (M58240) and vulvar melanoma (M87203) between 1 January 2000 and 1 September 2013 was conducted in Auria Biobank, Turku University Hospital (TYKS). Clinical histories were obtained from medical records. Population-based data for comparison regarding the incidence of vulvar melanoma were retrieved from the Finnish Cancer Registry. The study was approved by Auria Biobank’s Scientific Steering Committee and the Institutional Review Board of Turku University Hospital. Formalin-fixed, paraffin-embedded specimens of primary vulvar melanomas and reoperations were obtained from Auria Biobank. Haematoxylin-eosin stained slides from the melanoma specimens were examined by a pathologist to confirm or exclude the diagnosis of LS, and to confirm the Clark stage and Breslow’s index (Fig. 1). Survival time was calculated from date of diagnosis to date of death or 1 September 2013, whichever came first. To calculate the relative risk of vulvar melanoma among patients with LS compared with those without LS, a 2-by-2 contingency table analysis was used. To compare Breslow and Clark staging, Student’s t-test for 2 independent means for Breslow and one-way analysis of variance (ANOVA) for Clark were used. One-way ANOVA was used to compare tumour stage and the Kaplan–Meier estimator to study survival. To compare the 2 survival curves, the log-rank test was used. A p-value lower than 0.05 was considered significant.

RESULTS

The data search found 249 patients with vulvar LS, confirmed by biopsy. Among these patients, 3 vulvar melanomas were identified (Table SI 1). As comparison, 30 cases of SCC were found among patients with LS. Representative macroscopic and histological images of the melanomas are shown in Fig. 1. The patients were not diagnosed with LS until the diagnosis of melanoma was made. Six melanomas were diagnosed among patients who did not have LS among a total population of 250,000 female subjects. The risk of vulvar melanoma among patients with LS was
The presence of LS among patients with SCC is often not recognized (11). In the study with 3 adult patients with vulvar melanomas presenting with LS, LS was present in sites of melanoma-in-situ, but disappeared in sites of invasive melanoma, where dermal hyalinization was replaced by desmoplasia (3). In previous studies on vulvar melanoma this may have led to lack of recognition and, consequently, to under-reporting of LS. Also, in our 3 patients with vulvar melanoma and in the 3 adult patients described in detail previously, melanoma was at least 1.0 mm thick, and LS was present only on some parts of the vulvectomy specimen.

We report here, for the first time, an increased incidence of vulvar melanoma among patients with LS. The increased risk of vulvar malignancies other than SCC should be noted in patients with LS. Further studies are needed to evaluate the role of LS in the pathogenesis of vulvar melanoma.

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REFERENCES