



## Research Letter

## A case of lymphoepithelioma-like carcinoma of the uterine cervix in a patient with a history of high-grade squamous intraepithelial lesion

Li-Chuan Hsu<sup>a</sup>, Jung-Chia Lin<sup>b</sup>, Szu-Pei Ho<sup>b,\*,1</sup><sup>a</sup> Department of Obstetrics and Gynecology, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan<sup>b</sup> Department of Pathology and Laboratory Medicine, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan

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## Dear Editor,

Lymphoepithelioma-like carcinoma (LELC) is a variant of squamous cell carcinoma (SCC) that is rarely found in the uterine cervix. Compared with other types of cervical carcinomas, LELC of the cervix has a better prognosis [1]. Although the pathogenesis of cervical LELC is unclear, associations with Epstein-Barr virus (EBV) and human papillomavirus (HPV) have been demonstrated. Herein, we present a case of cervical LELC in a patient with a history of high-grade squamous intraepithelial lesion (HSIL) after cervical conization.

A 68-year-old Taiwanese woman (Gravida 4, Para 4) had been diagnosed with HSIL with margin involvement after a cervical conization 15 months before she presented to our hospital for a checkup. A Papanicolaou smear test result indicated malignancy; thus, a second cervical conization was performed, which showed LELC with a horizontal spread over 7 mm and margin involvement. A diagnosis of cervical cancer (International Federation of Gynecology and Obstetrics Stage IB1) was made, and radical hysterectomy, bilateral salpingo-oophorectomy, bilateral pelvic lymph node dissection, and para-aortic lymph node sampling were performed. Pathology revealed a poorly differentiated LELC (Figure 1A) with a horizontal spread of 11 mm and an invasion of 5 mm. Neither lymphovascular invasion nor lymph node metastasis was noted. Immunohistochemical analysis showed strong positive p16 staining (Figure 1B)

and negative EBV-encoded RNA (EBER) *in situ* hybridization (ISH) staining. The patient did not receive adjuvant chemotherapy or radiotherapy after her surgery and has been followed up in our hospital for 18 months without evidence of disease recurrence or side effects.

In the present case, because the EBER ISH stain was negative, the involvement of EBV was excluded. Similarly, recent evidence suggests that EBV is likely not related with the development of cervical LELC [2]. Because our patient had a history of HSIL, which was mainly caused by chronic HPV infection, and due to the strong positive p16 staining, indicative of a high-risk type HPV-associated lesion [3], we conclude that HPV infections likely play an important role in the carcinogenicity of cervical LELC. Moreover, because cervical LELC is a variant of SCC, and considering the patient's history of HSIL, we hypothesize that cervical LELC might share some common carcinogenic pathways with usual SCC, and that HSIL might be a precancerous lesion for cervical LELC. Despite the poorly differentiated pathological features of LELC, and unlike poorly differentiated SCC, LELC is associated with a better prognosis than other types of cervical carcinoma. This is likely due to the lower incidence of lymph node metastases [4].

The pathogenesis of LELC of the uterine cervix is not well understood. Based on the findings in our case, we suggest that HPV infection is a potential cause of cervical LELC as it might result in similar precancerous lesions as SCC that presents as HSIL. Further studies are required to determine the pathogenesis of this unique type of cervical cancer.

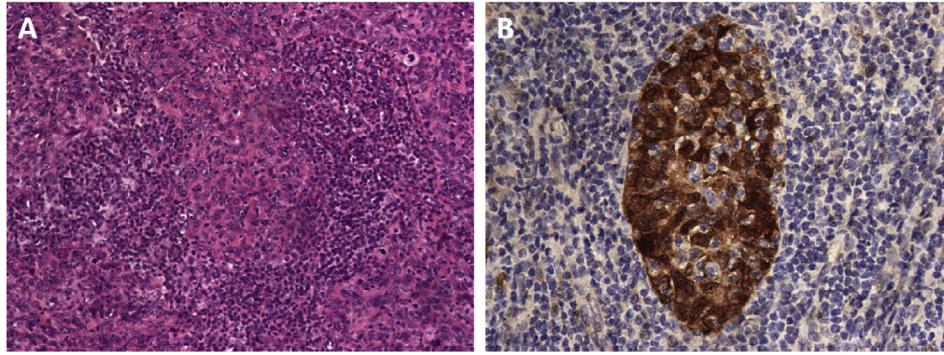
\* Corresponding author. Department of Pathology and Laboratory Medicine, Kaohsiung Veterans General Hospital, Number 386, Dazhong 1st Road, Zuoying District, Kaohsiung City 81362, Taiwan.

E-mail address: [spho@vghks.gov.tw](mailto:spho@vghks.gov.tw) (S.-P. Ho).

<sup>1</sup> Author contributions: L.-C.H. acquired the data and drafted the manuscript, J.-C.L. provided pathological slides and figure legends, and S.-P.H. critically revised the manuscript.

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**Figure 1.** (A) Lymphoepithelioma-like carcinoma (hematoxylin and eosin stain, original magnification 200 $\times$ ). An island of undifferentiated epithelial cells is seen in a background of lymphocytes. (B) The tumor cells showed strong positive p16 immunostaining (original magnification 400 $\times$ ).

### Conflicts of interest

The authors have no conflicts of interest relevant to this article.

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