Carcinoma in-situ of the Oral Mucosa has a Definite Tendency towards Keratinization

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A 81-year-old female had suffered from a white lesion in the right lateral margin of the tongue for 10 years. The lesions was surgically removed and examined histopathologically. The surgical specimen showed small foci of squamous cell carcinoma invading up to 4 mm in the muscle layer with a diameter of less than 7 mm in the central portion. The carcinomatous foci were surrounded by epithelial dysplasia in various degrees with a dense lymphocytic infiltration in the lamina propriae. Some of the dysplasia parts just next to the carcinomatous foci contained obviously atypical cells without basal cell alignment but with an apparent keratinizing tendency, which could not be otherwise diagnosed as carcinoma in-situ. Based on this case report, a new concept of carcinoma in-situ of the oral mucosa was proposed, because the histology was different in terms of keratinization degree from so-called carcinoma in-situ as frequently seen in the cervix uteri, which were mainly composed of proliferation of basaloïd cells.

Key words: carcinoma in-situ, differentiation, epithelial dysplasia, keratinization, oral mucosa

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Introduction

Carcinoma in-situ or severe epithelial dysplasia of the oral mucosa is defined as an intraepithelial full-thickness proliferation of squamous carcinoma cells (1). However, oral carcinoma in-situ or severe epithelial dysplasia does not seem to always be the same as that of the uterine cervix because the concept may have been simply applied to describe the oral lesion from what was used in the cervical lesion, in which basaloïd cells mainly proliferate. In this report, we present a case of a white lesion of the tongue mucosa, which we diagnosed as carcinoma in-situ despite its prominent keratinization, and discuss the possibility of establishment of the oral mucosa-specific entity of carcinoma in-situ.

Case report

A 81-year-old female had suffered from a white lesion in the right lateral margin of her tongue for 10 years. Biopsy and cytology examinations revealed no definite evidence of carcinoma during the follow-up period by an otorhinolaryngologist. After the patient was referred to our hospital, a final diagnosis of squamous cell carcinoma was made and the lesion was surgically removed.

Pathological findings

Macroscopically, the surgical specimen was a fragment of the oral mucosa, measuring 5 x 3.5 x 2 cm in size, with non-homogeneous white patches whose surfaces were rough. Histopathologically, there was a small focus of squamous cell carcinoma invading up to 4 mm deep in the muscle layer in the central portion of the surgical sample. However, the carcinomatous focus was small, less than 7 mm in diameter, and it was surrounded by a large area with epithelial dysplasia, which extended into the surgical margins. In the vicinity of the invasive carcinoma, the dysplastic epithelium showed a pronounced thickening with irregular-shaped rete processes associated with a dense lymphocytic infiltration in the lamina propriae (Fig. 1A). Within these rete processes, loss of cellular polarity and cell cohesion, dyskeratinosis, and nuclear atypia were prominent, while the epithelial basement membrane was intact and there was a definite tendency towards
keratinization in the direction of the surface (Fig. 1B). Although the epithelial cells in these areas were well differentiated and did not yet invade into the lamina propriae, we considered that they formed a carcinomatous focus because the severity of their cellular and structural atypia was more than that of dysplasia.

Discussion

Although the definite invasive focus of squamous cell carcinoma was limited to a small area in the present case, it was surrounded by dysplastic epithelial lesions whose cellular atypia was almost compatible with that of invasive carcinoma cells or was more. Thus, we diagnosed these severely dysplastic cells as carcinoma cells which were not yet invasive and had kept the basement membrane intact (1). For this carcinoma status, which was not-yet invasive, we used a nomenclature of carcinoma in-situ. However, this terminology has been applied to the squamous epithelial condition in which basaloid cells proliferate up to the surface layer but does not show apparent keratinization. We consider that this is because most of the oral mucosa is ectodermal in origin, and its dysplastic and carcinomatous states may be different from cervical ones. Recently Sakr and Crissman have also proposed the concept of squamous intraepithelial neoplasia, which seems to be an attempt to cover not-yet invasive carcinomas and to replace the mild to severe grading of epithelial dysplasia used in the uterine cervix lesions (2). Recently it has also been shown that this kind of oral mucosal carcinoma, with a superficial spread but minimal invasive changes, has been increasing in number and is found in elderly women in Japan with clinical characteristics of frequent recurrences in different parts of the oral mucosa (3).

References


(Accepted for publication October 28, 2002)