Cytological features of basal cell adenoma of the salivary glands: Analysis of 19 cases emphasizing stromal spindle cells

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<Introduction> Basal cell adenoma (BCA) of the salivary gland is a relatively rare benign tumor. Although the presence of stromal spindle cells is a characteristic histopathological feature (Fig. 1), this finding has not been the focus of much attention in the cytodiagnosis of BCA. Thus, we analyzed the cytological features of BCA, especially the presence of stromal spindle cells.

<Methods> Patients who were histopathologically diagnosed with BCA and underwent preoperative fine-needle aspiration cytological examination were enrolled in this study. The cytological characteristics including arrangement and shape of the neoplastic cells, nuclear and cytoplasmic features, and presence of stromal spindle cells were reviewed.

<Results> Nineteen patients were enrolled in the study. Table 1 showed the clinicopathological and cytological features of this study. The cytological specimens were cellular and composed of small or large clusters or both (Fig. 2A-C). The neoplastic cells had scant cytoplasm and small round to oval nuclei (Fig. 2A-C). Basement membrane-like material was observed in 57.9%, and peripheral palisading was noted in 84.2% (Fig. 2B,C). Loose aggregates of stromal spindle cells were present in 63.2% (Fig. 2B,C), and the stromal spindle cells shown in the histological examination of 85.7% of cases were expressed in the cytological specimens. Giemsa stain clearly demonstrated presence of metachromatic material around the epithelial nests (Fig. 2D).

<Conclusion> This study clearly demonstrated the relatively high frequency of stromal spindle cells in cytological specimens of BCA. This finding is characteristic of BCA, and therefore, the combination of cytological features, including packed clusters of neoplastic cells with scant cytoplasm and small nuclei, peripheral palisading, and basement membrane-like material, and the presence of stromal spindle cells could increase the diagnostic success of BCA.