Clear Cell Variant or Clear Cell Component?

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To the Editor

We enjoyed reading the case report by Yamamoto *et al.*⁴⁾ describing mucoepidermoid carcinoma (MC) with clear cell components. The paper once again aroused our interest in what has become a controversial issue in the field of pathology regarding the clear cell variant of MC; that is, how it should be defined, and how it should be diagnosed.

Histologically, MC consists of a mixture of mucus-producing, intermediate, and squamous cells. Depending on the constituent cells, MCs display several variants, such as oncocytic, sclerosing, and clear cell¹⁾. In general, an appropriate diagnosis can easily be made based on the morphological features typical to each specific type of tumor (Fig. 1c), even if it is predominantly composed of clear cells (Figs. 1a, 1b), as hopefully was evident from our previous case report³⁾. However, it seems that the histological definition of the clear cell variant of MC remains to be agreed upon. Although oral pathologists accept the concept of distinguishing between the clear

cell variant of MC and an MC with clear cell components, considerable controversy exists regarding how they should be defined. Therefore, when focal clear cells appear in MC, oral pathologists face difficulty in arriving at a diagnosis. Yamamoto *et al.* cited three histological factors and histochemical staining for diagnosis with reference to an earlier report²⁾. However, if we accept a diagnosis of the clear cell variant when clear cells only comprise a minor component of the MC, then the number of published reports on this variant automatically increases greatly. Therefore, the term “clear cell variant of MC” needs to be carefully used in indicating such lesions.

In conclusion, the definition of the clear cell variant of MC remains elusive and controversial. Evidence is currently insufficient to distinguish clear cell components from the clear cell variant. This indicates the need to arrive at clear-cut descriptions of each variant of MC so that all pathologists can share the same workable definition.

Fig. 1 Representative histopathological findings of clear cell variant of mucoepidermoid carcinoma in 51-year-old Japanese man

- a: Tumor was composed of solid sheet of clear cells with scanty fibrous stroma.
- b: At higher magnification, tumor cells were mainly composed of clear cells; some cells had eosinophilic granules in cytoplasm.
- c: Mucous, basaloid, intermediate, and squamous patterned cells, suggesting typical mucoepidermoid carcinoma, were all observed in same specimen. Cyst formation was also observed.

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