Short Communication/Kurze Mitteilung

**Identical Viral Infections in Four Cases
of Malignant Lymphoepithelioma**

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Tissue was prepared for electronmicroscopy taken from four patients suffering from malignant lymphoepithelioma of the nasopharynx and tonsil. Two types of viral inclusion bodies could be detected within many tumor cells in all specimens.

Fig. 1a. Part of nucleoplasm containing herpes virus like inclusions (↗) is expelled into the cytoplasm (Magn. 44,250)

Fig. 1b. Cytoplasmic area showing different sizes of virus capsids with more or less dense cores. Double membrane is obvious (↗) (Magn. 81,000)

Fig. 2. Tubular aggregates and single capsids (↗) of coronaviruses are seen within and outside of the endoplasmatic reticulum (Magn. 23,250)

A first group of viral particles measuring 75–120 nm in diameter occasionally were seen within the nucleoplasm. They have attributes in common with nucleocapsids of herpes virus as they show a dense core and a single surrounding membrane. More often empty capsids can be detected within the cytoplasm of tumor cells, where their small, more or less dense cores are encapsulated by a double membrane (Fig. 1a, b). The viral particles found in this study are not yet described in human lymphoepithelioma; they are very similar to those found in tissue culture lines derived from Burkitt's lymphoma (Epstein, 1962) and from nasopharyngeal carcinoma (De The et al., 1969). The demonstration of herpes virus like nucleocapsids in malignant lymphoepithelioma might be of great interest because many of those patients show a changing level of EB-virus antibody titer during therapy or recurrence of the disease (Lynn et al., 1977). This fact points at the possible role of a specific viral infection although it has to be mentioned that elevated EB-virus antibody titer is also present in mononucleosis or recurrent tonsillitis (Veltri et al., 1975).

A second group of viral inclusions is regularly seen within the enlarged endoplasmic reticulum of tumor cells and fibrocytes. These particles represent typical coronaviruses, ranging in size from 80–160 nm. They are made up of a double membrane around a dense to translucent core; this makes it difficult to distinguish them clearly from the herpes virus like cytoplasmatic capsids but they are easily to identify when composed in their characteristic tubular aggregation forms (Fig. 2) (Dalton and Haguénau, 1973). Coronaviruses are often found within the epithelial layer of the bronchial mucous membranes in patients with common colds.

References

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