

## Case Report

# Lymphoepithelioma Schmincke-Regaud

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*Summary.* This report is about a 68 year old man who died of a tonsillar lymphoepithelial carcinoma. The wide-spread metastases called attention to the tumor. Considerations about the diagnostic difficulties, the etiology and the proper position of the tumor are made. Based on literature and autopsy findings the justification for continuing to use the term "lymphoepithelioma" is discussed and defended.

Lymphoepithelioma is a relatively rare, world-wide spread tumor. It originates most frequently from the palatine tonsils, followed by the nasopharynx and the base of the tongue (Doerr, 1956). The tonsillar cancers represent around 0,94% (Schall, 1934) or at most 3% (Ackermann and Del Regato, 1962; Seifert, 1966) of all malignant tumors. Shu Yeh (Formosa, 1962) mentions 33 cases of lymphoepithelioma among 1 000 malignant tumors of the nasopharynx. Doerr (Kiel and Berlin, 1956, 1959a, 1961) found 2–4% of lymphoepitheliomas among the examined malignant ORL-tumors. Parshall and Stenstrom (Minnesota, 1953) came to this diagnosis in 5 cases out of 101 nasopharyngeal tumors. Ewing (1942) found among 200 tumors of the tongue and of the base of the tongue 4%, among 100 epipharyngeal tumors 11% of this kind of tumor. The peculiarities of our case, the frequently difficult diagnosis and questions about the etiology and the disputed position of this tumor have led to this publication.

## Own Observation

### 1. *Clinical Antecedents*

68 years old man, no important previous illness. For many years about 12 cigarettes and 1 liter of wine daily. March 1970 enlargement of the right pulmonary hilus at a routine radioscopy. Since July 1970 loss of appetite and weight, adynamia, dyspnea, generalized swelling of lymph-nodes. August 1970 biopsy of cervical lymph-node: metastasis of an undifferentiated carcinoma (Fig. 1 c, d). Suspicion of bronchial carcinoma and therapy with 6½ gram of Endoran during 3 weeks. No recovery, death by failure of heart and circulation.

### 2. *Postmortem Examination (Nr. 958/70 Inst. of Path. Heidelberg)*

Metastasizing lymphoepithelial carcinoma, preponderantly of the Schmincke-type. Both tonsils infiltrated by tumoral tissue (Fig. 1 a, b), the right tonsil of the size of a cherry, the left one like a broad bean, no evident formation of ulcer. The main bronchus of the lower lobe of the right lung infiltrated by tumoral tissue in an extension of 3½ cm, the regional mucosa destroyed, the tumor spreads distally in the mucosa of some bronchi and infiltrates the peribronchial pulmonary tissue forming a node of the approx. size of a mandarin. Up to hen's egg-sized, macroscopically mostly sarcomatoid metastases in axillary, submandibulary,

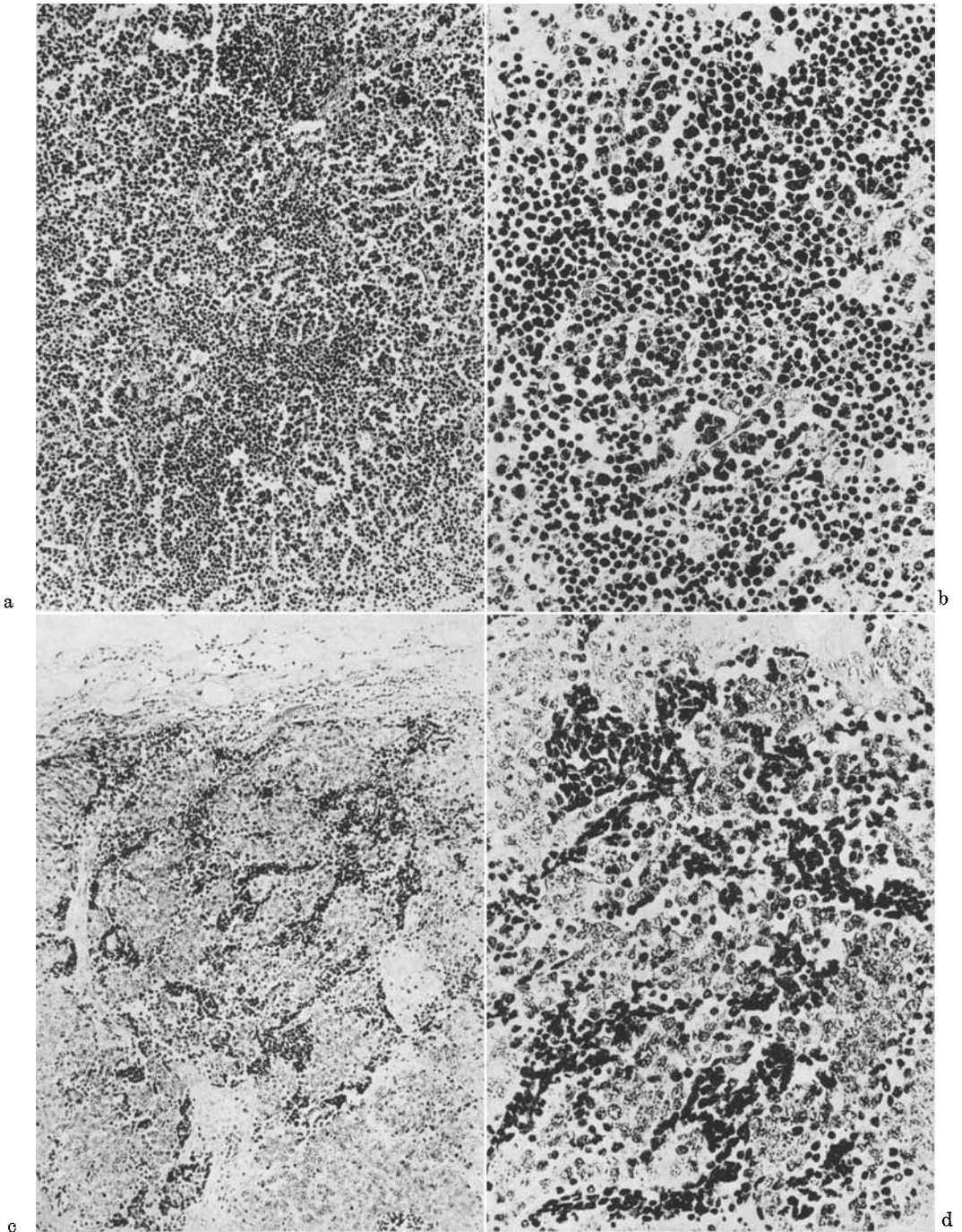


Fig. 1. a Tonsil. Primary tumor. Lymphoepithelial tissue. Fine-meshed epithelium. HE.  $\times 100$ . b Same section as a.  $\times 250$ . c Lymph-node (biopsy). Lymphoepithelial tissue. Mostly epidermoidal, partly network-like epithelium. HE.  $\times 100$ . d Same section as c.  $\times 250$ . The network clearly visible

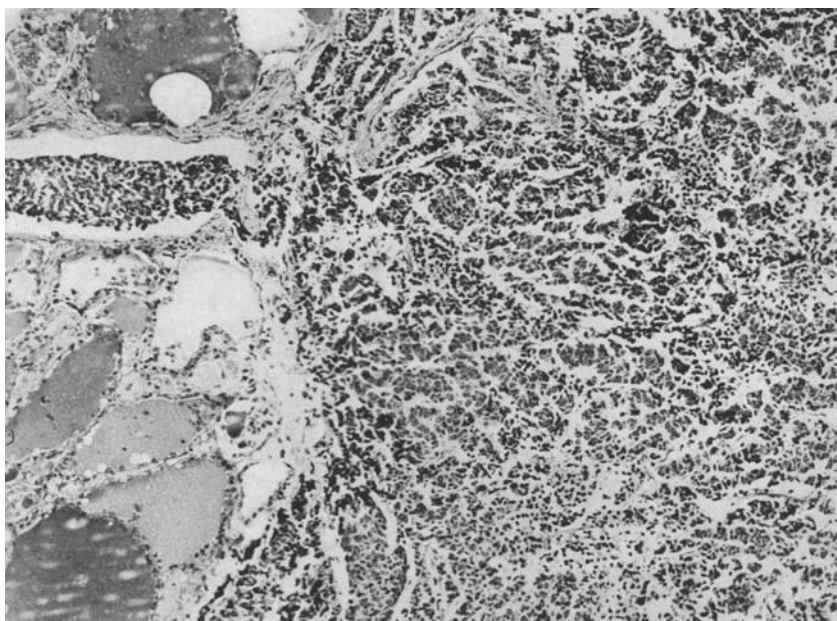


Fig. 2. Metastasis of the tumor in the thyroid gland. Note the lymphoepithelial composition. HE.  $\times 110$

cervical, supraclavicular, mediastinal, peribronchial, pulmonary, periaortic, hepatic, peripancratic, mesenteric, iliac and inguinal lymphnodes. Metastases in both adrenal glands and in the right lobe of the thyroid gland. A small metastasis in the cortex of the right kidney. Ulcerated metastases in the duodenal mucosa and submucosa near the pylorus, in presence of a chronic gastritis. Metastases in the first and second lumbar vertebra. Microscopic tumoral infiltration of the base of the tongue. Microscopic metastasis in the pancreas. Chronic bronchitis; pulmonary emphysema; moderate sclerosis of pulmonary arteries; cor pulmonale; acute bronchopneumonia of both lungs.

### *3. Histological and Cytochemical Examination*

H and E stained sections of heart, lungs, liver, spleen, kidneys, pancreas, adrenal glands, thyroid gland, both tonsils, base of the tongue and axillary, cervical and mesenteric lymph-nodes were examined. Besides, sections of the tumoral tissue were stained by the PAS and Gömöri methods and examined for enzymatic activity (acid phosphatase,  $\alpha$ -naphthylacetate-esterase and naphthol-ASD chloracetate-esterase). The tumoral tissue showed the following structure: No stroma. Large cells with shifting of the relation nucleus: plasma favouring the nucleus. Mostly ill defined, somewhat granular, weakly eosinophilic cytoplasm. The nuclei generally large with evident difference of size; mostly oval, but partly of irregular shape; generally poor in chromatin, sporadically hyperchromatic; mostly with one or two nucleoli; sharp-contoured nuclear membrane; moderately numerous typical and atypical mitotic divisions. These cells showed partly a close arrangement in form of variably large nests or cords with few intermingled lymphocytes, partly they were arranged loosely in form of a fine-meshed or wide open network with a more or less intense infiltration by lymphocytes and small

mesenchymic cells. In the areas of wide open network numerous larger cells were seen showing multiple nuclei or one large, irregularly shaped and hyperchromatic nucleus. The argentophilic fibres were displaced or destroyed in the compact tumoral areas, in the territories of loose network no new formation of fibrils was seen. The tumor cells could not be represented by the PAS-staining and showed no enzymatic activity. The compact and the loose areas of the tumor were distributed in the organs as follows: mixed, but preponderantly a more or less fine-meshed network with numerous round cells: tonsils, base of the tongue and thyroid gland (Fig. 2); mixed, but principally a wide open network with more or less numerous round cells and atypical large cells: bronchopulmonary node, lymph-nodes (Fig. 1b) and adrenal glands; mixed, but mostly a fine-meshed network with few round cells: pancreas.

### Discussion

The case of a tumor originating from the lymphatic annulus of the pharynx is described. This site of origin belongs to the organs designated by Jolly (1911) as lympho-epithelial organs. In this way he referred to organs with an intimate and mixed up growth of epithelium and lymphocytes. Mollier (1914) demonstrated this organic structure for the tonsils. Specific tumors of these organs were described for the first time by Schmincke (1921) and Regaud (1921). Both referred to tumors formed by epithelium and lymphocytes. The five cases described by Schmincke corresponded to a preponderantly lax, reticular structure of the epithelium, while Regaud referred to cases with a mostly compact arrangement of the epithelium cells. It seems probable, that the lymphoepithelial tumors were included in earlier statistics (Wood, 1910) in the group of so called alveolar sarcomas (Dietrich, 1926). The lymphoepithelial composition was described as being identical in the metastases (Derigs, 1923). Metastases in regional lymph-nodes are referred to be frequent, distant metastases were found to be rare (Ennuyer and Baitini, 1956; Wey, 1968) and to be present mostly in lymph-nodes and mediastinum, less frequently in liver, lung and skeleton. Therefore, our case represents a rarity considering the almost generalized metastasising.

The difficulties and, thanks to its roentgen-sensitivity, importance of the diagnosis of a tonsillar lymphoepithelial tumor have been exposed by Doerr (1956). The increased difficulty of the diagnosis when examining a lymph-node is made clear by our case. The diagnostic distinction of the lymphoepithelial carcinoma from other epidermoidal tumors and from the retothelial sarcoma requires an exact knowledge about this tumor. In our case we questioned the almost indisputable macroscopic diagnosis of a bronchial carcinoma because of the type of metastasising, the infiltration of the tonsils and because of the sarcomatoid nature of the lymph-nodes. The tumoral infiltration of the base of the tongue and of the pancreas was not apparent before the microscopic examination.

The etiology of these tumors is not clear. The conception of dysgenesis defended by Schmincke was questioned by Doerr (1959). The habit of smoking is quoted as a factor favouring pharyngeal carcinomas (Wey, 1968). A new point of view has been gained by the experiences with the Epstein-Barr virus on patients with nasopharyngeal carcinomas (Old *et al.*, 1966).

After the description of lymphoepitheliomas by Schmincke and Regaud, the tumor's position as a separate entity was accepted during the first years and partly also later on. Since 1931 there have been criticisms of this conception (Kaufmann, Jaffé-Leicher-Pfeiffer). Shu Yeh (1962) denies the justification for making the diagnosis "lymphoepithelioma". The criticisms rest principally on 3 points: 1. The metastases very rarely show a lymphatic penetration. Shu Yeh misses in the literature more cases of lymphoepithelial metastases structured like the primary tumor since the description made by Derigs. 2. The similarity or sometimes apparent correspondence of Quick and Cutler's transitional-cell carcinoma with the tumor in question. 3. The roentgen-sensitivity postulated specially for this tumor for the first time by Schmincke has proved to be relative and valid also for other carcinomas of the tonsil (Shu Yeh).

As reply to this point of view we would like to refer to corresponding publications of Doerr (1956, 1959, 1961) and to our autopsy findings: 1. The lympho-epithelial tissue is a reality accepted by modern histology (Bargmann, 1951 for ex.). 2. Without doubt the histological examination shows—as in our case—that often it is difficult or almost impossible to differentiate the tumor in question from the transitional-celled cancers, but, on the other hand, the tumor frequently shows extensive areas, which do not permit any other description and designation than the one given by Schmincke. Referring to these two tumors, the apparent existence of transitional forms is described in the modern literature (Parkhill, 1968). Apart from the fact, that the possibility of divergence between the primary tumor and its metastases is familiar to the pathologist, we were able to demonstrate in our case the lymphatic component also in metastases in organs different from the lymphatics. 3. Here we have to state that we cannot be sure how far the lymphocytes disappeared due to the previous chemical therapy (Doerr, 1955). The secondary significance of the lymphocytes in the composition of this tumor has been mentioned for years (Dietrich, Doerr) and was demonstrated by Schmidt (1953/54) by proving the epithelial growth of this tumor in tissue cultures. The principal attribute of this tumor seems to rest on the possibility of a lax, loose, reticular growth (s. a. Langer, 1958). The knowledge of this fact is important in order to prevent the examining pathologist from an error of judgment. 4. A similar sensitivity to radiation should be no argument for considering two tumors as equivalent tissues. The more so, since the transitional-cell carcinoma may originate from different sites, while for the lymphoepithelioma for practical purposes only the areas derived from the primitive branchial intestine are valid as site of origin, that is, if we understand the term "lympho-epithelial" correctly.

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