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Thyroid Pathology

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Recent years have seen the publication of a number of excellent textbooks dealing with pathology of the thyroid gland. For the present issue of *Current Topics in Pathology* it was thus particularly difficult to select contributions which may offer further information for both pathologists and clinicians. The papers written for this issue can be divided into two sections: The first section addresses the surgical pathology of the thyroid while the second is primarily dedicated to basic aspects of thyroid metabolism, hormone transport, and growth factors in thyroid cells.

The observation of close histological and clinical similarities between low-grade B-cell lymphomas in various organs such as stomach, salivary gland, lung and thyroid has led to the proposal of the MALT (mucosa-associated lymphoid tissue) lymphoma concept. Dr. ISAACSON gives an excellent overview of this notoriously difficult problem in thyroid pathology. Dr. HARACH provides evidence that at least some thyroid C-cell carcinomas may arise from a pluripotent ultimobranchial stem cell. The histopathological diagnosis of both thyroid lymphomas and C-cell carcinomas is based on immunohistochemistry. Dr. JASANI'S article deals exclusively with immunohistochemical markers as tools for diagnosis, differentiation and prognosis. Another problem of routine thyroid pathology, namely minimally invasive follicular carcinoma, is addressed in our own contribution (SCHMID and co-workers). Dr. SAKAMOTO describes in his article poorly differentiated carcinoma of the thyroid, a tumour type so far not included in the WHO classification of thyroid tumours. Its morphological and clinical features distinguish this aggressive tumour clearly from both differentiated (follicular and papillary) and anaplastic carcinoma. Dr. GIMM and co-workers emphasise the need for thyroidectomy and lymphadenectomy in papillary thyroid carcinoma.

In the second part, Dr. GÄRTNER describes the mechanisms of various growth factors on thyroid cells. These growth factors apparently mediate both the maintenance of growth and the paracrine communication to fibroblasts and endothelial cells. Dr. KÖHRLE'S contribution deals with the key enzyme of thyroid hormone activation, the selenoenzyme type I 5'-deiodinase, the expression of which seems to be closely associated with thyroid differentiation. In an
immunoelectronmicroscopical study it is shown by Dr. ZIMMER and co-workers that IgG uptake of thyrocytes in patients suffering from thyroid autoimmune disease from blood circulation takes place at the basolateral membrane; subsequently IgG is transported via a transcytotic pathway to the apical membrane where IgG can be targeted to thyroid autoantigens. Finally, Dr. LANGSTEGER gives a comprehensive overview of the clinical and diagnostic aspects of thyroid hormone transport protein abnormalities.

The contributions in the present issue should be considered as adjuncts to common textbooks on thyroid pathology. We hope in addition that they may help pathologists in their routine diagnostic work as well as stimulate further research in this important field.

Münster, October 1996

KURT W. SCHMID
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