Paraneoplastic endocrine syndromes

General:

Paraneoplastic endocrine syndromes are triggered by an ectopic hormone production of malignant tumors. Substances or hormones, which are released increasingly by these tumors, cause the symptoms of endocrine hy-peractivity conditions. Some of these syndromes can endanger the patient more than the malignant basic disorder, they must therefore be diagnosed and treated immediately. The endocrine disorder manifests occasionally in the early stage of tumor growth. The clinical symptoms can appear as (e.g. in the small-celled bronchial carcinoma) neuropathies, myopathies, polymy-ositis, dermatomyositis, endocrinopathy.

Ectopic ACTH syndrome: ectopic production of ACTH or CRF (Corticotropin Releasing Factor), thereby triggering ectopic Cushing syndrome with typical symptoms, frequently observed in bronchial carcinoma as primary disorder. Syndrome of inappropriate ADH secretion (SIADH): caused by inadequate, mostly tumor-conditioned ADH secretion, e.g. by small-celled lung carcinomas (Schwartz-Bartter syndrome, synonym SIADH), renal sodium loss and clinical signs of water intoxication, (hypervolemia). Up to 50% of the pa-tients show increased ADH levels in serum, however only 5% of the patients show symptoms of the SIADH. Tumor hypercalcemia: ectopic production of parathormone related peptide.

Hormone	Tumor	Symptoms
Calcitonin	Bronchial carcinoma (small-cell), carcinoid, pheochromocytoma	Asymptomatic
Gonadotropin *e.g. β-HCG*	Bronchial carcinoma, ovarian carcinoma, testicular tumor, hydatidiform mole	*Children*: Pubertas praecox *Men*: Gynecomastia *Women*: Oligomenorrhea, hyperthyroidism at extremely high levels
Growth hormone *(STH)*	Bronchial carcinoma, carcinoid, pancreatic tumor	Acromegaly
Insulin like growth factor	Mesenchymal tumors, hepatoma	Hypoglycemia

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