

Seventh International Thyroid Conference

Boston, Mass., June 9–13, 1975

PROGRAM

ABSTRACTS OF PAPERS PRESENTED



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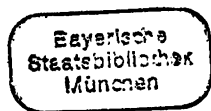
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SESSION 27

Thyroid physiopathology

(Abstracts 160-164)

Chairman: A. B. HAYLES, *Rochester, Minn., U.S.A.*

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160. Recurrent goiter and amenorrhea-galactorrhea syndrome in a patient with a thyrotrophin- and prolactin-producing pituitary adenoma

K. HORN, R. FAHLBUSCH, U. HACHMEISTER, C. R. PICKARDT, K. v. WERDER and P. C. SCRIBA, *München, Federal Republic of Germany*

A 22-year-old woman presented a history of hyperthyroidism, recurrent goiter with tracheal compression and concomitant amenorrhea and galactorrhea. These symptoms originated from a TSH- and PRL-producing pituitary adenoma resulting in an enlarged sella turcica. Basal TSH-levels fluctuated between 11.9 and 29.4 $\mu\text{U/ml}$ and could not be suppressed by exogenous T3 and/or T4 medication, leading to thyrotoxic hormone levels (T3: 392 ng/100 ml; T4: 17.5 $\mu\text{g}/100\text{ ml}$). The PRL-levels were 10 times above normal, between 154 and 328 ng/ml. Stimulation with TRH (200 μg i.v.) caused only an insignificant increase of TSH- and PRL-levels. In contrast to the stimulation test, suppression of TSH- and PRL-secretion occurred with the same kinetics after oral administration of 500 mg L-dopa (from 26.2 to 18.8 $\mu\text{U/ml}$ TSH and from 226 to 90 ng/ml PRL) and after 5 mg 2-Br- α -ergocryptine with a nadir after 3 hr (TSH: from 11.9 to 6.4 $\mu\text{U/ml}$; PRL: from 155 to 37 ng/ml). The immediate decrease of TSH- and PRL-levels after transsphenoidal hypophysectomy combined with cryotherapy was again parallel and approached levels below normal.

Electron microscopic examination of the adenoma revealed two types of cells with distinct secretory granules. One cell type could be identified as lactotrophic. The other cells, most likely producing TSH, had long cell bodies and secretory granules with a diameter of 90-200 nm, some of them bound to the cell membrane. Both cell types were found closely associated and spread all over the adenoma.

These clinical and ultrastructural findings give for the first time strong evidence for an autonomous adenoma of the pituitary producing both TSH and PRL.