Introduction

Utilizing several case reports, Professor Felix Beuschlein from Ludwig Maximilian University, Munich, discusses the clinical, biochemical and imaging work-up for the differential diagnosis of adrenal incidentalomas, which are among the most frequent tumours. Within the last 20 years, a sharp increase in the identification of adrenal incidentalomas has occurred due to the wide use of high-resolution abdominal imaging procedures. The incidence in a series of computerized tomography (CT) scans is 0.4–4%.

All patients with adrenal incidentalomas require a thorough endocrine work-up. Since as many as 10% of pheochromocytomas can be clinically silent but catecholamine excess can result in life-threatening situations (e.g., during surgery), the presence of pheochromocytomas has to be excluded in each case. Homogeneous lesions with low HU (<10) are benign. Surgery should be performed if hormonal excess is present and/or tumour size is >6 cm, and should be considered for tumours 4–6 cm. All remaining patients need follow-up.

Professor Albert Beckers of the Centre Hospitalier Universitaire Liège, University of Liège, reviews pituitary incidentalomas. The prevalence of pituitary incidentalomas at autopsy is 14.4%; with imaging (magnetic resonance imaging [MRI] + CT), it increases to 22.5%. Professor Beckers presents data from a study in the province of Liège, which showed a much higher preva-

lence of pituitary adenomas (approximately 3.5- to 5-times greater) than that previously reported (0.02–0.03%). In the case of a pituitary microincidentaloma, MRI follow-up at 12 months and a simple prolactin determination is the best strategy in terms of cost-effectiveness, as the prevalence of other endocrinopathies is very low. In case of an incidentally discovered macroadenoma, complete endocrinological and visual field evaluations are warranted. If hormone excess is found, specific therapy should follow; if no hormone excess/deficiency and/or visual field defect is found, the patient should be clinically reevaluated and have a follow-up MRI at 12 months. In cases of tumour growth or visual field defect, transsphenoidal surgery is recommended.

Professor Aldo Pinchera from the University of Pisa discusses thyroid incidentalomas. The prevalence of thyroid incidentalomas by palpation is 4%, by ultrasonography, 20–35% and at autopsy, 50%. Thyroid ultrasound will detect cancers that remain silent during a lifetime. Previous irradiation, ages <20 and >60 years, male sex, history of neoplasia and other neoplasia involving the lymph node, rapid growth and hardness are clinical signs of malignancy. The only ultrasound pattern predictive of carcinoma is the presence of microcalcifications. In cases of thyroid incidentaloma, thyroid-stimulating hormone (and thyroxine) should be determined. Measuring calcitonin is of benefit as early

detection of intrathyroidal medullary carcinoma is possible. Nodules >1 cm, and <1 cm in the presence of ultrasound signs, are suggestive of malignancy, and high-risk patients should be submitted to fine needle aspiration cytology (FNAC). In the presence of two or more thyroid nodules larger than 1–1.5 cm, those with a suspicious sonographic appearance should be aspirated. Professor Pinchera concludes that ultrasound-guided FNAC is an accurate technique at this time but, in the near future, molecular diagnosis will prevail.

Disclosure Statement

There is no conflict of interest.

Hans P.F. Koppeschaar
Afdeling Klinische Endocrinologie
Universitair Medisch Centrum Utrecht
Utrecht, The Netherlands