# VIRCHOWS ARCHIV

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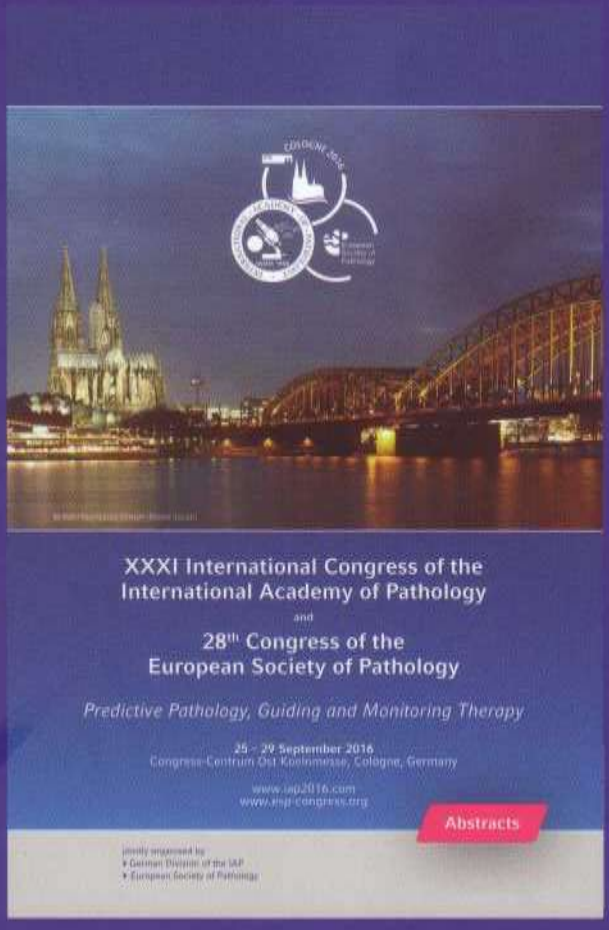


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Monday, 26 September 2016, 09.30-10.30. Hall 11 3
**PS-03 Endocrine Pathology**

**PS-03-002**
**Prognostic criteria for pituitary adenomas**
L, Mitrofanova*, P. Konovalov, O. Raspopova. U. Tsoy Federal Almazov Centre, Dept, of Pathology, St. Petersburg. Russia

**Objective:** To determine prognostic criteria for pituitary adenoma depending on hormone production.
**Method:** We studied the hormonal state and Ki-67 prolifirative index in 142 patients with pituitary adenomas. MRI was used to estimate the tumour size and to monitor its growth. Tumours exceeding 10 mm in size were defined as macroadenomas, and those smaller than or equal to 10 mm as microadenomas. Immunohistochemical staining was carried out with anti-bodies against Ki-67 and 6 pituitary honnones.
**Results:** Macroadenomas were mainly mammosomatotropinomas or gonadotropinomas with tumour with invasive growth and recurrence. Proliferative activities of micro- and macroadenomas were not significantly different. The average size of recurrent adenomas was 29 ± 12 mm (the non-recurrent ones were 17,6± 10 mm, p< 0,001), their proliferative activities did not differ. The proliferative activity of invasive adenomas was significantly higher than in non-invasive. Gonadotropinomas were more often recurrent and demonstrated invasive growth without clinical signs of hormonal hypersecretion.
**Conclusion:** Our study showed that the most part of gonadotropinomas did not have any clinical signs. In all the cases they were macroadenomas and often recurrent. The tumour proliferative activity more than 2,6 % can be used as a prognostic criterion only for gonadotropinomas.

**PS-03-003**
**Somatostatin receptor subtype 2A and 5 expression in medullary thyroid carcinoma**
V. Delektorskaya*, G. Chemeris, A. Pavlovskaya Russian Cancer Research Centre, Dept, of Pathology, Moscow, Russia

**Objective:** The aim of the study was to assess somatostatin receptor subtype 2A and 5 (SSTR 2A and 5) expression and clinical significance in Medullary Thyroid Carcinoma (MTC).
**Method:** Twenty-seven MTC patients were retrospectively evaluated. Immunohistochemical expression of receptors was studied in the primary and metastatic tumours using monoclonal antibodies against SSTR 2A (clone UMB-1) and SSTR 5 (clone UMB-4). The staining results were correlated with various clinico-pathological and outcome parameters. **Results:** The diagnosis of MTC was based on the pathological features and positive immunoreactivity of the tumours for calcitonin and CEA. We identified the SSTR 5 as the most Sequent receptor subtype in these turnouts. SSTR 5 showed positive immunohistochemical expression in 16 of 27 (59.3 %) MTC samples as compared to 8 of27 (29.6 %) for SSTR 2A. No case showed only SSTR 2A expression. Analysis of primary tumours and their lymph node me- tastases revealed a similar pattern of SSTR immunoreactivity. SSTR 2A and SSTR 5 protein expression was not related to clinical parameters or outcome.
**Conclusion:** The presence of SSTR 2A and 5 receptors in MTCs may be an important indication for the diagnostic procedures and targeted therapy with somatostatin peptide radioligands. A prognostic value of these markers should be further evaluated.

**PS-03-004**
**Morphological study of papillary thyroid carcinoma with biomineralization**
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**Objective:** Papillary thyroid carcinoma (PTCa) is the most common form of malignant tumours of this organ, covering approximately 70 % in the structure of morbidity. One of important prognostic PTCa factors is pathological biomineralization. The purpose is to study morphological value of biomineralization in papillary thyroid cancer.
**Method:** Histological, histochemical techniques and scanning electron microscopy with microanalysis and X-ray diffraction were used to study the samples of PTCa.
**Results:** The first group of patients included 27 women and 3 men and the average age was 56.93 ±2.18 years old. In patients with symptoms of miner-alization the largest tumour size was 1,84 ± 0,13 cm, in seven cases metastases were found in peripheral lymph nodes. Patients, who had no signs of PTCa mineralization, made up the second group of 30 people—24 women and 6 men. The laigest tumour size averaged 1,44 ±0,09 cm (p<0.07), in eight cases metastases were found in peripheral lymph nodes. Comparing the number of patients with metastases in both groups (7—Group I, 8—Group II) and describing the size of tumour, subject to presence and absence of metastases in patients (2,09±0,2 cm and 1,31 ±0,17 cm), there was significant difference found between indicators of clinical cases of studied groups (p < 0.02).
**Conclusion:** Mineralized samples of papillary thyroid cancer reach larger compared to cases without evidence of calcification. Comparing the first and second series of samples PTCa showed no connection between bio-mineralization and age of patients. Hydroxyapatite is the main mineral, which is formed during pathological biomineralization PTCa.

**PS-03-005**
**Synchronous pheocromocytoma and gastrointestinal stromal tumour in a patient with germline mutation in the TMEM127 gene**
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**Objective:** Germline mutations in the TMEM127 (transmembrane protein 127) gene have been detected in familial pheocromocytoma paraganglioma and more recently in familial pheochromomoma and renal cell carcinoma syndrome. Camey-Stratakis syndrome (Carney dyad) is characterized by a pheocromocytoma (PHEO)/gastrointestinal stromal tumour (GIST) dyad, secondary to SDHB, SDHC or SDHD gene mutations. We report a synchronous PHEO and GIST case in an individual with TMEM127 germline mutation.
**Method:** A 70-year-old woman presented with both a left adrenal nodule and a small gastric tumour (antrum wall), incidentally discovered during follow-up for horseshoe kidney. Both tumours (101 and 35 mm respectively) were excised with pathological, immunohistochemical and molecular stucjies following.
**Results:** Pathological examination showed a PHEO immunopositive for chromogranin, synaptophysin and Ki-67(<1 %) but negative for cytokeratins (AE1/AE3). The GIST was positive for CD34, CD117(c- kit), DOG1, smooth muscle actin (focal) and Ki-67 (5 %) but negative for cytokeratins, desmin and S100. Sequencing analysis was used for KIT gene screening in the PHEO and for KIT and PDGFRB in the GIST with negative results. Germline mutational analysis showed a heterozygous missense mutation in exon 4 of TMEM127: NM 017849.3:c.620C>T (p.Ala207Val) (Chr2(GRCh37):g.96919643G>A).
**Conclusion:** This is the first case of synchronous PHEO and GIST (Carney dyad) associated with germline mutation in the TMEM127 gene.

**PS-03-006**
**Thyroid findings in a patient with Birt-Hogg-Dube syndrome**
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