

## **ESF REPORT**

### **Summary**

The symposium entitled "Adrenal Tumors and Hypertension", approved by the European Science Foundation, was organized on 7-8<sup>th</sup> of June 2012 in Romania as part of the European project Network for Adrenal tumors (ENS@T) by ENS@T Steering Committee together with the Romanian Society of Psychoneuroendocrinology (RPNES). The symposium was hosted by hotel Sport in the mountain resort Poiana Brasov.

There were three main objectives of the symposium:

1. Analysis of the implementation of the European and international guidelines for diagnosis and treatment of adrenal tumors associated with hypertension in Romania
2. Hypertension in primary hyperaldosteronism as public health problem. Interdisciplinary point of view in management strategy of this type of secondary hypertension was presented in a multidisciplinary approach, with participation of endocrinologists, cardiologists, surgeons, general practitioners and obstetricians.
3. Original scientific contributions of Romanian medical clinicians and researchers in this field.

The symposium ENS@T / ESF was joined with the XVIII National Symposium of the Romanian Society of Psychoneuroendocrinology (RPNES). The last one was held on June 9, 2012 with the theme "Adrenal Axis - from behavior to tumors".

ENS@T symposium was held for two days. There were 22 invited speakers and 131 participants, 25 physicians in training as endocrinologists (resident in endocrinology). The participants were from Romania, except lecturers invited from other countries: Italy, Netherlands, United Kingdom, Germany and Lithuania and they were predominantly endocrinologists and cardiologists, but also surgeons, obstetricians, specialists in imaging and invasive radiology, pathologists, biochemists, research fellows.

5 plenary lectures were sustained (45 minutes) as well as 19 lectures (25 minutes) and 42 short communications (oral and posters)

## **Description of Scientific Content and Discussion**

### **Objective 1:**

Three members of the ENS@T Steering Committee presented an up to date of diagnosis and treatment of primary hyperaldosteronism (Franco Mantero), pheochromocytoma (Jacques Lenders) and adrenal incidentalomas (Mihai Coculescu), highlighting the increasing prevalence, oligo symptomatic or atypical clinical presentation, values and limits of basal and dynamic hormonal tests.

Invited Romanian Speakers presented the implementation of consensus guidelines in our country, with limits in the genetic assessment (Aurora Milos), in adrenal imaging (limiting number of PET) and in blood sampling by adrenal vein catheterization (Bogdan Dorobat). It was mentioned the important role of pathologists in tumor classification and diagnosis (Gratiela Hortopan, Angela Borda). Genetic screening strategy in primary hyperaldosteronism and pheochromocytoma was presented by Serban Radian), with an interesting debate on the indications of genetic screening and implementation of these explorations in clinical medical practice. There were also debates on the relative efficiency of measuring direct plasma renin as compared to plasma renin activity and the place of hormonal dynamic tests (saline suppression test, captopril challenge and, as the golden standard test for primary hyperaldosteronism, fludrocortisone suppression test)..

Another interesting topic was the treatment of resistant hypertension, focused on new therapies such as renal sympathetic block or baroreceptors blockade (Mircea Cinteza). The importance of antibodies against renin (Aliskiren) in high renin hypertension was also discussed (I. Bruckner)

Surgeons have shown the limits of surgery in correcting hypertension, both in hyperaldosteronism (Radu Mihai, Oxford), Cushing's disease (M. Buchfelder, Erlangen) and pheochromocytoma (Victor Tomulescu, Bucharest, Sorin and Diana Paun Bucharest).

### **Objective 2**

Endocrine secondary hypertension, especially primary hyperaldosteronism, as public health issue has been debated by cardiologists and endocrinologists based on the experience accumulated in Romania.

This approach is a result of increasing prevalence of arterial hypertension in Romanian adult population (SEPHAR study) (Mioara Dorobantu), of resistant hypertension (Mircea Cinteza), of low-renin hypertension (Ioan Bruckner), of high blood pressure in young people (Raluca Trifanescu), and on the other side of the high prevalence of primary hyperaldosteronism (Franco Mantero) and incidental adrenal tumors (Mihail Coculescu), which require a correct positive and differential diagnosis. In SEPHAR study conducted in Romania in 2005 - 2012, the cardiologists found in Bucharest, Romania's capital, resistant hypertension in 15.7% of the investigated population; only 7% of patients known with the diagnosis of high blood pressure had well controlled blood pressure on different drugs. In a series of 2017 subjects, prevalence of hypertension was found to be 1% across the country and 31.4% in Bucharest

The prevalence of primary hyperaldosteronism increases from 2% among patients with stage 1 hypertension to over 5% in patients with resistant hypertension. Serum potassium is normal in 50% cases, making this parameter unreliable for a precocious diagnostic. Correction of the effect of excessive aldosterone production can be achieved in many cases by medication. Aldosterone receptor blockers (spironolactone and eplerenone) control hypertension and also prevent vascular fibrosis (effect of aldosterone associated with sodium chloride).

On the other hand, adrenal adenomas are not rare; prevalence of asymptomatic adrenal incidentalomas could reach 4-5% in the 5th decade of life in the general population, indicating a relationship with the biology of ageing (Mihail Coculescu)

Dr. Valentinas Matulevicius the National Institute of Endocrinology of Kaunas in Lithuania showed that epidemiological data are similar to those in Romania. There are some similar difficulties in exploration and diagnosis.

These epidemiological data impose a screening and diagnostic strategy, based on the subtype classification of primary hyperaldosteronism, on bilateral adrenal venous sampling with hormonal testing, coupled with CT scan.

### **Objective 3**

During ENS@T / ESF Symposium it was presented the prevalence of essential hypertension (SEPHAR study) and of hypertension secondary to adrenal adenomas ("C.I. Parhon" National Institute of Endocrinology) in Romania. The Romanian database of adrenal tumors (Corin Badiu, Simona Galoiu), the situation of bilateral adrenal tumors (Catalina Poiana), hypertension in incidentally discovered pheochromocytomas (ML Gheorghiu) and rare adrenal disease recorded in Orphanet network (Cristina Rusu) were also presented.

There were also communications with rare cases and unusual clinical associations. For example, Cushing syndrome with an adrenal tumor with a neuroendocrine component (Carmen Ardelean, D. Terzea, Monica Gheorghiu), an association between with pheochromocytoma and duodenal somatostatinoma in a type 1 neurofibromatosis patients (C. Iosif). Clinicians presented mute pheochromocytomas despite double major surgery (Constantinoiu S. et al), one cases of Takotsubo cardiomyopathy with ECG appearance similar to myocardial infarction, reversible after catecholamine producing tumor removal (Simona Jercalau, Mariana Dobrescu), stress induced arterial hypertension (Tiberiu Nanea), secondary adrenal hypertension in various adrenal enzyme deficits associated with defects in sexualisation (Corina Lichiardopol), twin pregnancies as a model of pseudo-primary hiperaldosteronism (Ilinca Gussi et al).

The cardiologists presented data on cardiac remodeling of left ventricle during experimental catecholamine stress induced by dobutamine. They try to identify echocardiography and scintigraphy, markers for irreversible fibrotic lesions (Tiberiu Nanea).

Medical genetics centers presented various mutations in patients with either family or sporadic bilateral pheochromocytomas in Romania, namely the classical cases of MEN 2 syndrome with RET mutations, MLPA analysis of SDH complex mutations in pheochromocytomas (Catalina Luca), SDHB mutation in hereditary paragangliomas (Aurora Milos), gene mutations in von Hippel Lindau syndrome (Catalina Poiana, Serban Radian et al).

Biochemists and clinicians assessed plasma metanephrines as markers for pheochromocytoma in patients with chronic renal failure on dialysis (Gener Ismail, Dan Niculescu) and salivary catecholamines in pheochromocytomas (Ana Maria Stefanescu, Corin Badiu et al).

Data on robotic surgery in adrenal tumors in Romania were presented by Victor Tomulescu.

## **Assessment of the results and impact of the event on the future direction in the field**

Arterial Hypertension related to adrenal tumors is a problem of public health both in Romania and Lithuania. Adrenal tumors were considered rare diseases, i.e. object of ESF Programmes (ENS @ T) and EC Programmes (Orphanet) for rare diseases. However, the current epidemiological data (obtained in Romania and other countries), revealed that adrenal tumors are related to the biology of ageing, usually under the clinical form of incidentalomas. On the other side, among resistant arterial hypertension, a relevant percentage is represented by primary hyperaldosteronism.

Is required to develop in Romania medical centers able to conduct bilateral adrenal venous sampling, Laboratory of hormonology for current assay of plasma renin (either direct or plasma renin activity) and aldosterone levels, coupled with CT scan.

Exploring the genetics of patients with adrenal tumors generating secondary hypertension should be regulated based on consensus genetic screening to every country.

Cardiologists and endocrinologists, together with academic societies must develop consensus guidelines for diagnosis and treatment of resistant hypertension, of familial high blood pressure and of hypertension in young people. .

Adrenal tumor surgery benefits from laparoscopic and robotic techniques in development, but does not solve alone the problem of secondary hypertension associated with adrenal tumors.

**A booklet with abstracts was printed, under the title: Adrenal Tumors and Hypertension, M. Coculescu, M. L. Gheorghiu, C. Badiu (editors)  
Editura Medicala Antaeus, 2012, ISBN: 978-973-88856-6-0**

## **SCIENTIFIC PROGRAMME**

ENSAT Symposium

Poiana Brasov, Sport Hotel, Grand Meeting Hall, level 2

ENS@T Day 1, Thursday, 7<sup>th</sup> of June 2012

- 09:20-9:30 Opening ceremony
- 09:30-11:05 Lectures  
Chair: Corin Badiu (Bucharest)
- 09:30-09:55 Resistant hypertension. Therapeutical options  
Mircea Cinteza (Bucharest, Romania)
- 09:55-10:20 Adrenal venous sampling in primary aldosteronism  
B. Dorobat, Monica Gheorghiu, F. Mantero, M. Coculescu (Bucharest, Romania and University of Padova, Italy)
- 10:20-10:45 Renin in arterial hypertension  
Ioan Bruckner (Bucharest, Romania)
- 10:45-11:05 Adrenal gland in tumor pathology  
Monica Hortopan, D. Ioachim, V. Herlea, E. Stoica-Mustafa, C. Pechianu, I. Gherlan, M. Manu, F. Bealcu, I. Bunea, I. Sinescu (Bucharest, Romania)
- 11:05-11:30 Coffee break
- 11:30-12:15 Plenary Lecture 1  
Chair: Mihail Coculescu (Bucharest)  
Mineralocorticoid hypertension-diagnostic guidelines and algorithms  
Franco Mantero (Padova, Italy)
- 12:15- 12:45 Plenary Lecture 2  
Chair: Vochita Mogos (Iassy)  
Prevalence of Hypertension and Cardiovascular Risk Profile in Adult Population in Romania (SEPHAR Study)  
Maria Dorobantu (Bucharest, Romania)
- 12:45-13:05 Lecture  
Chair: Catalina Poiana (Bucharest)  
Adrenal incidentalomas associated with arterial hypertension – a diagnosis challenge Mihail Coculescu (Bucharest, Romania)
- 13:05-15:00 Lunch break
- 14:00-15:00 Posters
- 15:00-16:05 Lectures  
Chair: Aurora Milos (Timisoara)
- 15:00-15:20 Some aspects regarding the laboratory diagnosis in primary hyperaldosteronism

- Melania Balaş, Holger S. Willenberg , Camelia Gurban, Ioana Zosin  
(Timisoara, Romania and University Hospital Dusseldorf, Germany)
- 15.20-15.40 Adrenal tumors database in Romania - structure and use  
C. Badiu, A. Ionita, Simona Galoiu (Bucharest, Romania)
- 15:40-16:05 Immunohistochemistry of adrenal tumors associated or not with hypertension  
Angela Borda (Targu Mures, Romania)
- 16:05-16:40 Coffee break
- 16.40-17.05 Lecture  
Chair: Mihail Coculescu (Bucharest)  
Pitfalls in the diagnosis and management of bilateral adrenal tumors  
Catalina Poiana, Mara Carsote, Raluca Trifanescu, Cristina Capatana, Monica Gheorghiu, Cristina Ene, D. Hortopan, Dana Terzea (Bucharest, Romania)
- 17.10-17.55 Short Communications  
Chair: Dumitru Branisteanu, Iassy
- 17:10-17:25 Adrenal Cushing's syndrome with neuroendocrine component  
Monica Livia Gheorghiu, Dana Terzea, Carmen Ardeleanu (Bucharest, Romania)
- 17:25-17.40 Left ventricular function in renovascular hypertension after revascularization: comparison with essential hypertension  
CC. Beladan, BA. Popescu, C. Jantea, F. Matei, A. Calin, M. Rosca, A. Boanta, R. Enache, C. Usurelu, C. Ginghina (Bucharest, Romania)
- 17.40-17.55 Aetiology's analysis of adrenal hypertension in patients younger than 40 years  
Raluca Trifănescu, Andra Caragheorghopol, Ana Maria Ștefănescu, Ligia Rădulescu, Mara Carșote, Cristina Ene, Dan Hortopan, Anda Dumitrașcu, Cătălina Poiană (Bucharest, Romania)
- 18:00-18:20 Lecture  
Chair: Corin Badiu (Bucharest)  
Adrenal Tumors with arterial hypertension in Lithuania - an update  
V. Matulevicius, L. Barsiene, R. Verkauskiene, I. Banisauskaite (Kaunas, Lithuania)
- 19.00- 21.30 RPNES & ENS@T welcome cocktail

Poiana Brasov, Sport Hotel, Grand Meeting Hall, level 2  
ENS@T\_Day 2, Friday, 8<sup>th</sup> of June 2012

- 09.00-11.00 Short communications: Markers for pheochromocytoma  
Chair: Serban Radian (Bucharest)
- 09.00-09.15 Plasma markers of pheochromocytoma in chronic kidney disease  
Dan Niculescu, Gener Ismail (Bucharest, Romania)
- 09.15-09:30 Salivary markers of pheochromocytoma  
Corin Badiu, Simona Jercălău, Sorina Schipor, Ana- Maria Stefanescu (Bucharest, Romania)
- 09.30-09.45 Hypertension in incidentally discovered oligosymptomatic phaeochromocytomas  
Monica Livia Gheorghiu, Mădălina Vintilă, Ionela Baci, Ș. Radian, Cătălina Poiană, C. Badiu, M. Coculescu (Bucharest, Romania)
- 09.45-10.00 Takotsubo cardiomyopathy in pheochromocytoma: case report and literature review  
S. Jercalau, M. Dobrescu, A.M. Stefanescu, C. Badiu (Bucharest, Romania)

- 10.00-10.15 Mute pheochromocytoma during two major surgeries in patient with somatostatinoma and type 1 neurofibromatosis  
S. Constantinoiu, A. Constantin, Cristina Iosif, F. Băcanu, Cătălina Poiană, M. Coculescu (Bucharest, Romania)
- 10.15-10.30 Clinical phenotype details in a family with Von Hippel-Lindau Disease carrying the c.500 G>A, p.Arg167Gln VHL gene mutation  
Mara Carsote, S. Radian, Nicoleta Baculescu, Cristina Ene, Ana Maria Stefanescu, Dana Terzea, D. Hortopan, Catalina Poiana (Bucharest, Romania)
- 10:30-10:55 Lecture  
Chair: Catalina Poiana (Bucharest)  
Stress hypertension: Left Ventricle Imagistic  
Tiberiu Nanea (Bucharest, Romania)
- 11.00-11:30 Coffee break
- 11:30-12:15 Plenary Lecture 3  
Chair: Corin Badiu (Bucharest)  
Modern clinical management of pheochromocytoma  
Jacques W.M. Lenders  
(Department of Internal Medicine, Radboud University Nijmegen Medical Centre, Nijmegen, The Netherlands)
- 12.15 – 13.40 Lectures  
Chair: Diana Paun (Bucharest)
- 12.15 – 12.35 Genetic diagnosis of pheochromocytoma in endocrine practice  
Serban Radian (Bucharest, Romania)
- 12.25 – 12.55 SDHB gene mutations. Hereditary pheochromocytoma-paraganglioma syndrome PGL4  
Aurora Miloş, Ioana Natalia Miloş, Doina Piciu, Romanița Glăja, Maria Oprea, Ionela Tudora (Timisoara, Cluj-Napoca, Romania)
- 12.55 – 13.10 Twin pregnancy- a model for false primary hyperaldosteronism  
Camelia Dutescu, C. Poalelungi, Ilinca Gussi (Bucharest, Craiova, Romania)
- 13.10 – 13.25 Mutation screening of SDH complex in Romanian patients with pheochromocytoma using MLPA analysis  
Catalina Luca, Marieta Costache, Corin Badiu, Ana-Maria Stefanescu (Bucharest, Romania)
- 13.25 – 13.40 Rare adrenal disorders recorded in Orphanet  
Cristina Rusu, Monica Panzaru (Iasi), Corin Badiu (Bucharest), Orphanet - Romania
- 13:30-14:30 Lunch
- 14.30- 15.30 Posters
- 15.30-16.10 Lectures  
Chair: Raluca Trifanescu (Bucharest)
- 15:30-15.50 Adrenal disorders of sex development associated with hypertension  
Corina Lichiardopol-Răducanu (Craiova, Romania)
- 15.50-16.10 Laparoscopic surgery for pheochromocytomas - our experience  
Diana Paun, Roxana Ganescu, C. Dumitrache, S. Paun (Bucharest, Romania)
- 16.10 -16.40 Plenary Lecture 4  
Chair: Monica Gheorghiu (Bucharest)

Adrenalectomy – the cure for hypertension?

Radu Mihai (Department of Endocrine Surgery, John Radcliffe Hospital, Oxford, UK)

16:40-17:00 Coffee break

17.00- 17.45 Plenary lecture 5

Chair: Mihail Coculescu (Bucharest)

Pituitary surgery for Cushing's disease

Michael Buchfelder (Erlangen University, Germany)

17.45- 18.10 Lecture

Chair: Monica Gheorghiu (Bucharest)

Open, laparoscopic or robotic approach for benign or malignant adrenal pathology: 10 years experience of Fundeni Clinical Hospital

V. Tomulescu, B Parliteanu, O. Stanciulea, C Blajut, L Barbulescu, V. Herlea, I.Popescu (Bucharest, Romania)

18.10 Conclusions

20.30 Dinner of ENS@T Symposium

## POSTER PRESENTATIONS

### Adrenal

P1. The bone evaluation in patients with non-secreting type adrenal tumors

Mara Carsote<sup>1</sup>, Cristina Ene<sup>2</sup>, Gabriela Voicu<sup>2</sup>, Adriana Gruia<sup>3</sup>, V.Radoi<sup>1</sup>, Roxana Miron<sup>4</sup>, M.Coculescu<sup>1,2</sup>, Catalina Poiana<sup>1,2</sup>

<sup>1</sup> Carol Davila University of Medicine and Pharmacy, <sup>2</sup> C.I.Parhon National Institute of Endocrinology, <sup>3</sup> MedLife, Bucharest, Romania, <sup>4</sup> Constanta Clinical Hospital, Constanta, Romania

P2. Dexamethasone suppression test – three decades later

A. Dumbravă\*, Diana Arghire\*\*, Ana Ciobanu, Alina Bucur, Milka Rotaru

\* IBCV, Iassy, \*\* "Al.I.Cuza" University, Iassy

P3. Incidental and non-incident adrenal lesions in the casuistry of Endocrinology Clinic Târgu-Mureș

Imre Zoltán Kun<sup>1</sup>, Zsuzsanna Szántó<sup>2</sup>, Karola Albert<sup>2</sup>, Ionela Pașcanu<sup>1,2</sup>, József Balázs<sup>1</sup>

<sup>1</sup> Clinical Hospital Mures County, Endocrinology Clinic, <sup>2</sup> University of Medicine and Pharmacy Târgu Mureș, Department of Endocrinology

P4. Polyglandular Autoimmune Syndrome – Schmidt Syndrome

Case Report

Ana Valea, Iulia Iacob, Andra Morar, Ileana Duncea

Endocrinology Department, U.M.F. "Iuliu Hațieganu" Cluj-Napoca

P5. Secondary adrenal hypertension in a patient with primary hyperaldosteronism and bilateral distal renal arterial stenosis

Ligia Rădulescu<sup>1</sup>, Raluca Trifănescu<sup>1,2</sup>, Claudiu Stoicescu<sup>3</sup>, Andra Caragheorgheopol<sup>1</sup>, Cătălina Poiană<sup>1,2</sup>

<sup>1</sup> "C.I.Parhon" Institute of Endocrinology, <sup>2</sup> "Carol Davila" University of Medicine and Pharmacy, <sup>3</sup> Cardiology Dept, University Emergency Hospital, Bucharest, Romania

P6. Psychic manifestations in Cushing syndrome

Cezara Botezatu<sup>1</sup>, Letitia Leustean<sup>2</sup>, Cristina Cristea<sup>2</sup>, Maria Christina Ungureanu<sup>2</sup>, Cristina Preda<sup>2</sup>



<sup>1</sup> Psychiatric Hospital “Socola”, <sup>2</sup> Department of Endocrinology, University of Medicine and Pharmacy “Gr.T.Popa”, Iasi

P7. Adrenal adenoma versus adrenal carcinoma

R.Baloescu<sup>1</sup>, Cristina Ene<sup>2</sup>, D.Hortopan<sup>1</sup>, D.Ioachim<sup>1</sup>,  
B.Stanescu<sup>1,2</sup>, Mara Carsote<sup>2</sup>, Dana Terzea<sup>1,2,3</sup>, Catalina Poiana<sup>1,2</sup>

<sup>1</sup> C.I.Parhon National Institute of Endocrinology, <sup>2</sup> Carol Davila University of Medicine and Pharmacy, 3 - Babes Institute of Development and Research, Bucharest, Romania

Obesity, metabolic and reproductive disorders

P8. Insulin resistance and DHEAs but not androgen receptor CAGn polymorphism are determinant factors of hirsutism severity in PCOS

Nicoleta Baculescu<sup>1</sup>, S. Radian<sup>1,2</sup>, Ilinca Gussi<sup>1</sup>, Daniela Aflorei<sup>1</sup>, Monica Gheorghiu,  
Cătălina. Poiană<sup>1,2</sup>, F. Grigorescu<sup>3</sup> & M. Coculescu<sup>1,2</sup>

<sup>1</sup>Davila University of Medicine, <sup>2</sup>C. I. Parhon Institute of Endocrinology, Bucharest, Romania <sup>3</sup>IURC, Molecular Endocrinology, Montpellier, France

P9. Insulin resistance associated with the polycystic ovary syndrome – is the Pro12Ala polymorphism of the PPAR- $\gamma$  gene involved?

Florina Gliga<sup>1</sup>, Ionela Pascanu<sup>2</sup>, Claudia Banescu<sup>3</sup>, Adina Stoian<sup>1</sup>,

<sup>1</sup>Department of Pathophysiology, <sup>2</sup> Endocrinology Department,<sup>3</sup> Department of Genetics, University of Medicine and Pharmacy Tg Mures

P10. Body mass index and possible alterations of body image and body satisfaction in adolescents

Diana Arghire\*, A.Dumbravă\*\*

\* Al.I. Cuza University, Iassy, \*\* IBCV, Iassy

P11. Association between type D personality and family history of metabolic diseases in young patients with obesity and diabetes mellitus

<sup>1</sup>Cristina Blaga, <sup>1</sup>Ramona Olaru, <sup>1</sup>Ivone Constantin-Fronea, <sup>1</sup>Olivia Georgescu <sup>1,2</sup>Sorina Martin, <sup>1,2</sup>Anca Sirbu, <sup>1,2</sup>Simona Fica

<sup>1</sup> Elias University Hospital, <sup>2</sup> Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

P12. The relation between glucocorticoid profile and cardio-metabolic complications in a group of severely obese patients

<sup>1</sup>Lavinia Stejereanu, <sup>1</sup>Lavinia Antonie, <sup>1</sup>Ioana Lambrescu, <sup>1,2</sup>Anca Sirbu, <sup>1,2</sup>Sorina Martin, <sup>1,2</sup>Simona Fica

<sup>1</sup> Elias University Hospital, <sup>2</sup> Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

#### Pituitary

P13. Screening of AIP mutations in young Romanian patients with sporadic pituitary adenomas

Ionela Baci<sup>1</sup>, Cristina Căpățână<sup>1,2</sup>, Daniela Aflorei<sup>1</sup>, Ileana Botușan<sup>2</sup>, Anda Dumitrașcu<sup>1</sup>,  
Cătălina Poiană<sup>1,2</sup>, M. Coculescu<sup>1,2</sup>, Ș. Radian<sup>1,2</sup>

<sup>1</sup> C.I. Parhon National Institute of Endocrinology, <sup>2</sup> C. Davila University of Medicine and Pharmacy, Bucharest, Romania

P14. SOX 2 immunohistochemical expression in pituitary adenomas

Cristina Capatina<sup>1,2</sup>, Iustina Chelaru<sup>2</sup>, Marius Raica<sup>3</sup>, Anca Cimpean<sup>3</sup>, Catalina Poiana<sup>1,2</sup>  
Mihail Coculescu<sup>1,2</sup>

<sup>1</sup> Endocrinology Department, “Carol Davila” University of Medicine and Pharmacy, Bucharest, Romania, <sup>2</sup>“C. I. Parhon” National Institute of Endocrinology, Bucharest, Romania, <sup>3</sup> Histology Department, “Victor Babes” University of Medicine and Pharmacy, Timisoara, Romania

P15. Delayed recognition of pituitary failure as a cause of persistent hyponatremia – case report

Diana Pințoiu<sup>1</sup>, Șerban Radian<sup>1,2</sup>, Dorina Hagiiani<sup>3</sup>, Anda Dumitrașcu<sup>1</sup>, Cătălina Poiană<sup>1,2</sup>

1 Carol Davila University of Medicine and Pharmacy, 2 C.I. Parhon Institute of Endocrinology, 3 Individual Medical Practice Dorina Hagiiani, MD, Bucharest, Romania

P16. Mortality in acromegaly patients in the last decade

Simona Găloiu<sup>1,2</sup>, Sorin Ioacă<sup>1,3</sup>, Ionela Baciuc<sup>1</sup>, Mihai Coculescu<sup>1,2</sup>

<sup>1</sup> “Carol Davila” University of Medicine and Pharmacy, <sup>2</sup> “C. I. Parhon” Institute of Endocrinology, <sup>3</sup> “N. Paulescu” National Institute of Diabetes, Nutrition and Metabolic Diseases, Bucharest, Romania

P17. Nelson’s syndrome – case report

Adina Sandu<sup>1</sup>, Viorel Scripcariu<sup>2</sup>, Ioana Vasiliu<sup>1</sup>, Ramona Popovici<sup>1</sup>, Jeanina Idriceanu<sup>1</sup>, Felicia Crumpei<sup>3</sup>, Mihai Grigoras<sup>3</sup>, Voichita Mogos<sup>1</sup>, Carmen Vulpoi<sup>1</sup>

<sup>1</sup> Department of Endocrinology, <sup>2</sup> Department of Surgery, <sup>3</sup> Department of Radiology, UMF “Gr.T.Popa” Iasi

P18. Cushing's disease - limits

Jeanina Idriceanu<sup>1</sup>, Cristina Preda<sup>1</sup>, Corina Galeșanu<sup>1</sup>, Maria-Christina Ungureanu<sup>1</sup>, Viorel Scripcariu<sup>2</sup>, Iulia Potorac<sup>1</sup>, Ioana Vasiliu<sup>1</sup>, Ramona Popovici<sup>1</sup>, Elena Bivoleanu<sup>1</sup>, Voichița Mogoș<sup>1</sup>, Carmen Vulpoi<sup>1</sup>

<sup>1</sup> Department of Endocrinology, <sup>2</sup> Department of Surgery University of Medicine and Pharmacy “Gr.T.Popa” Iasi

P19. Differentiated thyroid carcinoma associated with medullary thyroid carcinoma - 2 cases report

Catalina Poiana<sup>1,2</sup>, Mara Carsote<sup>2</sup>, A. Goldstein<sup>1</sup>, D. Ioachim<sup>1</sup>, S. Radian<sup>1,2</sup>, Dana Terzea<sup>1,2,3</sup>, D. Hortopan<sup>1</sup>, B. Stanescu<sup>1,2</sup>

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<sup>3</sup> V.Babes National Institute of Development and Research, Bucharest, Romania

P20. Diagnosis of pheochromocytoma and paraganglioma by neuroendocrine markers overexpression: an immunohistochemical study of 20 cases

Sinziana Muraru<sup>1</sup>, AnaMaria Stefanescu<sup>2</sup>, Corin Badiu<sup>1,2</sup>

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