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Editorial

European Congress of Nuclear Medicine 2003 – a Central & Eastern European perspective

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Introduction

The EANM 2003 Congress-President, Prof. P.P. van Rijk in his EJNM congress issue wrote: " the main theme of the EANM 2003 congress is quality. This is very evident in all the components of the meeting, including plenary sessions, continuing medical education, expert opinion lectures and the industrial exhibition".

He was right. The organisation was close to, if not, perfect. Everything operated like the mechanism in a Swiss watch: smooth and on time.

The aim of this lecture is not to summarise all the events — more experienced people would do that better. We would like to show the participation of Central and Eastern European Societies of Nuclear Medicine in this Congress.

Committees/Chairs

Of 12 members of the Scientific EANM 2003 Committee, two were from CEE countries: L. Pavics from Hungary (Chief Reviewer — Radiopharmacy) and P. Lass from Poland (Chief Reviewer — Neurology/Psychiatry). Mr. Z. Petrovic from Slovenia was a member of the Technologists Program Committee.

Ten people chaired the sessions: K. Borbely (Hungary), J. Fettich (Slovenia), S. Illic (Serbia), G. Janoki (Hungary), P. Lass (Poland), M. Myslivecek (Hungary), L. Pavics (Hungary), T. Stopar (Slovenia), I. Szilvasi (Hungary). Z. Petrovic (Slovenia) chaired technologists session.

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Industrial exhibition

Four commercial companies from CEE had their own booths during the Congress; three radiopharmaceutical companies and one gamma-cameras producer: Lacomed Ltd. (Rez, Czech Republic), The Institute of Isotopes and MEDISO Medical Imaging Systems (Budapest, Hungary), Radioisotope Centre Polatom (Otwock, Poland). The biggest and most impressive was the Hungarian booth. At the Lacomed booth an interesting promotion of new nuclear medicine atlases was held, as a continuation of a well-organised education action.

Scientific contribution

At this Congress a total 1252 papers were presented: 431 in oral sessions and 821 in poster sessions. In total 29 papers in oral sessions and 107 in poster sessions originated in Central and Eastern Europe. The distribution of these papers is presented in Table 1.

If we examine this table, both the CEE participation in EANM presentations and their geographical distribution remains little

Table 1. Papers from CEE countries

Country	Oral presentations	Poster presentations	Total
Poland	13	20	33
Hungary	6	15	21
Serbia & Montenegro	4	14	18
Russia	2	13	15
Slovenia	2	9	11
Croatia	2	5	7
Czech Republic		16	16
Bulgaria		7	7
Ukraine		4	4
Romania		2	2
Bosnia & Herzegovina		1	1
Slovakia		1	1
Total	29	107	136

changed in comparison to the previous Congresses. The total amount of presentations stayed at the level of about 11%, a little less in oral presentations, a little more in posters. As usual the highest number of papers was from Poland, Hungary and Czech Republic, a little less than usual from Russia and more than previously from Slovenia. A continuous increase in the number of presentations came from Serbia, Bulgaria and Ukraine.

Presentations overview

Cardiology

Teresińska et al. (Warsaw, Poland) presented their studies on ^{123}I-MIBG monitoring of transmyocardial laser therapy, showing the reduction in the activity of the cardiac adrenergic system (O 135). The other interesting study on ^{123}I-MIBG cardiac application in patients after heart transplantation came from Ljubljana, Slovenia by Milcinski et al. (O 136), and another one on cardiac ^{123}J-MIBG scanning in hypertensive and cardiomyopathic patients by Sergienko (Moscow, Russia, P 70).

Szilvasi et al. (Budapest, Hungary) showed that nitroglycerine-augmented ^{99m}Tc-Tetrofosmin myocardial scintigraphy is not a substitute for rest ^{201}Tl-201 scintigraphy (O 166). The issue of nitroglycerine injection and gated SPECT has been also studied by Kobylecka et al. (Warsaw, Poland) showing a segmental decrease in MIBI uptake, but not a decrease in LVEF (P 3).

Kostkiewicz et al. (Cracow, Poland) compared Coronary Artery Calcium Score and multi-slice computer tomography concluding that CACS could be used as a screening tool for risk stratification (O 246).

An interesting multi-centre study came from Prague, Olomouc and Rez in Czech Republic on ^{201}Tl versus ^{18}FDG PET in myocardial viability assessment. They suggest that the performance of ^{201}Tl scanning is so good that it should be used as a test prior to FDG scanning, referring to PET scanning only those patients with a non-viable myocardium (P 62).

A contribution to the discussion in the long-running saga on the stress-test versus the dipyridamole test came from Zajecar (Serbia) by Mitov et al., advocating the safety of the latter. Foeldes (Budapest, Hungary) studied the influence of dipyridamole on organ distribution of MIBI, as well as DTPA and anti-CEA antibodies in rabbits (P 90).

Garai et al. (Budapest, Hungary) raised an interesting question of patients' preparation for CABG. They proposed ^{99m}Tc-HSA hand perfusion scanning for the safe removal of a radial artery graft (P 75).

Oncology

A significant number of papers were devoted to oncology.

A number of presentations were devoted to peptides. Hubalewska and colleagues from Cracow (Poland) presented an interesting comparison of ^{99m}Tc-Hynic-EDDA-TATE somatostatin receptors ligand and ^{111}In-octreoscan in tumour imaging (O 39). Technetium radiopharmaceutical seems to be both a cheaper and a promising ligand. The sceptical voice came from Budapest, Hungary, where Szilvasi et al. showed that octreotide scanning is not cost-effective in incidentally found gastrointestinal carcinoid (P 192).

Cholewiński et al from Lublin (Poland) showed the usefulness of ^{99m}Tc-depreotide in children's lymphoma (O 223). A paper by Belohlavek et al. from Prague, Czech Republic also referred to paediatric oncology, studying the impact of FDG PET on the therapeutic management of children with solid tumours (P 140). About one third of those results changed the course of therapy.

The significant impact of PET on patient management has been also shown in a paper by Makaiova and co-workers from Bratislava, Slovakia (P 139).

Myslivecek and colleagues (Olomouc, Czech Republic) underlined the role of ^{99m}Tc-MIBI scanning in the prognosis and follow-up of multiple myeloma (P 197).

An issue of increasing importance is sentinel node imaging.

Hubalewska and co-workers from Cracow (Poland) studied a set of lymphoscintigraphies in cervical cancer, which is a relatively new and important issue in gynaecology (O 412), with promising results. Koranda et al. (Olomouc, Czech Republic, described the same issue in endometrial cancer (P 724). Kafka et al from Hradec Kralove, Czech Republic proposed ^{99m}Tc-labelled dextran as a sentinel node imaging tracer (P 37). A technical mammary sentinel node radiolocalisation paper on breast cancer was given by a group by Rajtar et al from Budapest, Hungary (P 735). A high percentage of lymph node unspecific binding in a ^{99m}Tc--AntiCEA Antibody immunolymphoscintigraphy paper came from a group of Foeldes from Budapest, Hungary (P 740). Gastric and colon lymphoscintigraphy intra-operative nanocolloid scintigraphy results were presented by Hubalewska and colleagues from Cracow, Poland (P 741). One could ask the question whether their first conclusion that "SN metastases in gastric and colorectal cancer can be detected by preoperative lymphoscintigraphy..." is too far reaching.

Some papers were devoted to scintimammography. A group from Russia, Serbia and Italy studied the kinetics of ^{99m}Tc-HMPAO uptake in breast tumours (P 226). They propose this tracer as a marker of tumoral and lymph node blood flow. A tetrofosmin/ /MIBI scintimmamography studies came also from Sofia (Bulgaria) and Sremska Kamenica (Serbia — P 234, P 242).

Regarding radionuclide therapy, an interesting but, to me, slightly controversial paper came from Sofia, Bulgaria. Kostadinova and co-workers strongly advocate phosphorus-32 as a bone metastases treatment agent for its much lower price. This is an approach which one comes across today here and there, even on the pages of JNM/NMC; however, I would be cautious.

Endocrinology

Endocrinology is still an important issue in nuclear medicine, although the role of cardiac and oncologic studies is continuously increasing.

Many papers were devoted to ^{131}J therapy, both of hyperthyreosis and cancer.

Parfieńczyk and co-workers (Bialystok, Poland) presented an interesting paper on apoptotic markers following ^{131}J-therapy (O 66). Listewnik et al. (Szczecin, Poland) underlined the role of thyroid volume measurement in ^{131}J Graves' disease therapy, showing the lower effectiveness of therapy in large thyroid volume (O3 43). Galuska et al. from Debrecen (Hungary) advocated the ^{99m}Tc-DTPA-SPECT in the assessment of Graves' orbithopathy (O 347). An interesting model of calculating the functioning volume of autonomous thyroid nodules calculated from scintigraphic data using the geometric method, has been proposed by Foeldes et al., Budapest, Hungary (P 512). An interesting model of calculating dosimetry in benign and malignant thyroid diseases

came from Medvedec and Dodig (Zagreb, Croatia).

Balenovic and colleagues from Zagreb (Croatia) analyzed the course of pregnancy in women after ^{131}J-therapy of thyroid carcinoma. They believe that after an interval of 1 year post therapy there is no reason to discourage women from becoming pregnant (O 348).

The effects of ^{131}J thyroid cancer therapy were discussed in two posters from Institute of Oncology, Sremska Kamenica, Serbia (P 468, P 473), and in three posters on thyroid self-stunning (P 467) and on thyroid remnants ablation (P 469, P 470) from The Institute of Oncology, Kiev, Ukraine.

An interesting poster came from Cluj-Napoca, Romania on thyroid tumours of non-thyroid origin (P 586).

A number of papers were focused on parathyroid imaging. Szilvasi and co-workers analysed the usefulness of tetofosmin and sestamibi in parathyroid imaging. While showing a similar retention, they showed a higher sestamibi wash-out, therefore advocating the latter tracer (O 185). A similar paper came from Szeged, Hungary by Besenyi et al. (P 579). Rep et al. (Ljubljana, Slovenia) advocated the use of parathyroid SPECT when compared to the two-tracer wash-out technique (T 14). Kobylecka et al. from Warsaw (Poland) presented a paper on semiquantitative ^{99m}Tc-MIBI washout in parathyroid adenomas (O 61). From the same group, a paper came showing no prolonged MIBI uptake in the majority of parathyroid adenomas (O 179), a paper analysing the usefulness of intra-operative gamma probe in primary hyperthyroidism (O 184), as well as a comparative study with ultrasound (P578). Dabasi et al. from Budapest (Hungary) presented a paper on intra-operative parathyroid hormone monitoring in secondary hyperparathyroidism (O 172).

Neurology

In a simple, but very elegant study Borbely et al (Budapest, Hungary) studied the plasticity of language networks by speech--activation SPECT in patients post brain-tumour operations. She showed a diversified increase of rCBF showing the undertaking of speech function by diverse brain areas post-operation (O 234).

The other neuroactivation study came from Varna, Bulgaria, where Klissarova et al. found no influence of neuroactivation on CBF in vascular dementia, but a positive effect in AD (P 284).

Gornostaev and colleagues from Moscow, Russia found a reduced cerebrovascular reserve in patients with arterial hypertension and metabolic syndrome (P 38). Cerebrovascular reserve in patients pre- and post carotid endarterectomy were studied by Garai (Budapest, Hungary). Utilising the acetazolamide stress-test they showed that endarterectomy does not improve post-op cerebrovascular reserve (P 275). Lishmanov and colleagues (Tomsk, Russia) analysed brain perfusion and the circadian rhythm of arterial pressure in hypertensive patients. They showed decreased CBF and cerebrovascular decrease in those patients, even if focal neurological symptoms were absent (P 281). Petrovic and co-workers from Zagreb, Croatia found significant asymmetries in ventral basal ganglia in Croatian war veterans with severe hyperarousal symptoms (P 304). In two posters also from Zagreb Crnkovic et al. studied CBF changes in schizophrenic patients treated with haloperidol and risperidone (P306 and P 309).

Brain SPECT studies were also applied is assessing the pharmacotherapy of depression, using ^{99m}Tc-TRODAT (Argyelan et al., Budapest, Hungary, P 326).

GI tract/Urinary tract/kidneys

Stępień and colleagues from Cracow, Poland studied oesophagus motility in systemic sclerosis. Frankly speaking, this is a rather old issue, but this paper had some pathophysiologic merit (P 555). Artiko et al. from Belgrade, Serbia evaluated liver transplant function using hepatic radionuclide angiography and hepatobiliary scintigraphy (P 604). From the same group a paper came on ^{99m}Tc-ciprofloxacin for the detection of abdominal and GI infections. Sinikin and co-workers (Tomsk, Russia) used biliary scintigraphy for the follow-up of jejunogastroplasty. A group led by Surma et al. from Łódź, Poland analysed the usefulness of ^{99m}Tc-HEPIDA hepatic and plasma clearance in the assessment of liver parenchyma performance (P 610). Three papers on gastric emptying came from Ajdinovic et al. and Obradovic et al. from Belgrade, Serbia (P 654 and P 661) and Klissarova et al., Varna, Bulgaria (P 660). Buncova et al. used ^{67}Ga for gastrointestinal transit (P672). Why gallium?

A group from Belgrade (Serbia), Jaksic et al. discussed the role of ^{99m}Tc-p-aminohippuric acid as the new renal agent (O 104). A group from Niš, Serbia (Vlajkovic et al.) was traditionally focused on VU reflux studies (P 682).

Infection and inflammation

Planar and SPECT imaging of orthopaedic infections using ^{99m}Tc-ciprofloxacin was proposed by Obradovic et al. from Belgrade (Serbia).

Joints/Varia

An interesting series of three papers on holmium-166 in synoviorthesis was presented by a group of Szentesi et al. from Budapest, Hungary (P 498, P 499, P 500). In one experiment (on rabbits) and two clinical studies they concluded that ^{166}Ho is highly useful, probably less damaging than ^{90}Y, ^{169}Er or ^{186}Re as well as being suitable for large and medium-sized joints.

Andrysiak and colleagues (Warsaw, Poland) described the progression of joints ^{99m}Tc-IgG uptake despite clinical improvement with a good correlation with MRI findings. I wish I had such a strong belief in ^{99m}Tc-IgG.

Two papers on hip necrosis came from Slovenia. Milcinski et al. from Lubljana advocated the assessment of marginal zone in femoral hip necrosis scanning as a prognostic factor (P 760), Predic from Celje compared three-phase hip scanning with X-ray and MRI scanning (P 767).

Two posters were about thrombocytopenia. Nikolova et al. (Sofia, Bulgaria) advocated the role of ^{111}In labelled platelets in differential diagnosis, they can differentiate initial stage of hypersplenism from ATP when laboratory findings are identical (P 799). Todorovic-Tirnanic et al. from Belgrade, Serbia has carried on her earlier studies, advocating in vivo kinetics of ^{111}In labelled platelets as an important quality control parameter (P 803).

Radiopharmacy/Radiochemistry

Garnuszek et al. from Warsaw, Poland, proposed water-soluble radioactive platinum(IV) complexes as a potential carrier in RN therapy (O 365 and O 369). A group of Mirowski and colleagues (Łódź, Poland) studied opioid receptors radioligands in mammary carcinoma (P 339). Krasikova et al. (Moscow, Russia, P 357) studied the properties of ^{18}F labelled tyrosine as a promi-

sing PET tumour imaging agent. Two papers from POLATOM, Otwock, Poland were devoted to infection/inflammation imaging: the first on ^{99m}Tc-HIG I with, the second on ^{99m}Tc-ciprofloxacin distribution in rats (P 380, P 383).

Three interesting papers in therapeutic radiopharmacy came from Czech Republic. Kopecky and co-workers analysed ^{90}Y-DOTA-Tyr$_3$-octreotate renal uptake in rats (P 388). Kropacek et al. described the preparation of ^{166}Ho polylactic acid for liver tumour therapy (P 391). Laznicek et al analyzed the effect of receptor-specific binding on the distribution and elimination of ^{90}Y-DOTA-Tyr$_3$-octreotate in rats (P 533).

Instrumentation and physics

Bosnjakovic (Belgrade, Serbia) presented a paper on the application of $LaBr_3(Ce^{3+})$ as a basis of new scintillation detectors and new cost-effective dual-head gamma-cameras (O 114).

Three interesting papers came from the Institute of Medical Informatics (Warsaw, Poland) by Owczarczyk and colleagues (O 156, P 423, P 455). They focused on brain SPECT data quantification using the Talairach space, the 3D visualisation in template-based quantification of brain perfusion SPECT and compensating for detector response and attenuation in SPECT using the iterative BI-SMART algorithm. If they manage to develop this software in practice, this might be a promising alternative to the very good, but very expensive Nuclear Diagnostic AB (HERMES) solutions.

A paper on the application of the artificial neural network algorithm for parathyroid adenoma detection came from Stefaniak et al., from Lublin, Poland (P 420).

An interesting paper on MRI/SPECT image fusion in gliomas came also from Łódź, Poland (P 212) by M.R. Górska-Chrząstek et al.

Medved and co-workers, Zagreb, Croatia, developed an efficient, low-cost telemedicine software for nuclear medicine (P 807).

Radioprotection

Medvedec and Dodig (Zagreb, Croatia) compared the use of uncollimated gammacameras *vs* the dedicated whole-body-counter. They concluded that the use of uncollimated gammacameras, especially in wider-scale accidents is possible and justified, however a great attention should be paid to calibration methodology (O 284).

Concluding remarks

Analysing the comments made above, three types of remarks can be discerned: those which are favourable, warnings or disapprovals. It is good that Central European countries are increasingly having a visible input into the European nuclear medicine community; the participation of CE countries, measured by the number of presentations as compared with EANM Congress'97 increased from 7 to 11% of all contributions. The good news is that domestic radiopharmaceutical companies survived and still play a significant role in supporting research projects. More good news is also that the number of PET units in CEE countries has increased from 1 to 6, although, as seen above, their scientific role could be bigger.

CEE countries, or at least some of them, should be wary of increasingly losing contact with the leading European NM centres. And if good ideas still matter, even with old equipment, the question of how long this can continue has to be asked. This is the challenge for us and for the nuclear medicine community in a uniting Europe.