

Estonian Pain Society Latvian Association for the Study of Pain Lithuanian Association of Pain Clinics

## Pain in the Baltics







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## Welcome letter

It is our pleasure to welcome all participants on International Chronic Pain Symposium in January 2009, in Tallinn Estonia.

At the present time many exciting new developments in science as well as patient care have emerged. Advances in neuroimaging, clinical neurophysiology, neuroimmunology, and sensory testing allow more precise assessment of the pain phenotype in individual patients. Drugs that target different pain mechanisms are the aim of R&D programs in many pharmaceutical companies. The important concept of a mechanism-based approach for treatment is now addressed by clinical drug trials. Drug therapies are paralleled with traditional and new neuroaugmentative or neuroablative surgical techniques. Regulatory agencies are setting guidelines for the approval of treatment paradigms specific for chronic neuropathic pain. Furthermore, there have evolved new promising approaches to prevent neuropathic pain and chronicity. At the same time, we gain more insight into the epidemiology of neuropathic pain in many neurological disorders. These and other topics will be covered by leading experts at the International Symposium on Chronic Neuropathic Pain in Tallinn, Estonia.

This Symposium will bring you the latest and most up-to-date information for chronic pain from different Baltic countries. It will be an important milestone for all practicing clinicians from all disciplines with an interest in furthering the understanding and care of patients with chronic neuropathic pain.

Organizing committee



## International Association for the Study of Pain

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January 5, 2009

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Executive Director KATHY KREITER Seattle, USA Greetings to members of the Estonian Pain Society and Latvian Association for the Study of Pain, Lithuanian Pain Society attending the 2009 Annual Symposium on Chronic Pain in the Baltics. I extend my best wishes to you and your colleagues for a successful meeting.

As an international organization with members from more than 100 countries worldwide and 74 international chapters, the International Association for the Study of Pain takes great interest in the activities and vitality of its many national chapters. The relationship between IASP and its national chapters is a key priority for IASP and we are continually working to strengthen and further enhance IASP's support of your chapters in Estonia, Latvia, and Lithuania.

### **Congress Reminder**

IASP will hold the 13th World Congress on Pain<sup>®</sup> in Montreal, Canada, August 29-September 3, 2010, and I encourage you to attend this important gathering of worldwide pain specialists. The complete details and registration for the 13th World Congress on Pain will be posted on the IASP Website www.iasp-pain.org as they become available.

### 2008-2009 Global Year Against Cancer Pain

The 2008-2009 IASP Global Year Against Cancer Pain was launched on October 20, 2008 with the IASP Global Day Against Pain. Materials and articles are available on the IASP website: www.iasp-pain.org. It is my sincere hope that you will participate in the 2008-2009 IASP Global Year Against Cancer Pain by holding events and meetings on this important topic.

Please let me know if I can facilitate the growth of your chapter and its interactions with IASP. In addition, IASP Councilors will be happy to attend your future meetings to strengthen the relationship between your chapter and IASP. To inquire about inviting an IASP Councilor to your meeting, please email mira.ponomarchuk@iasp-pain.org.

Yours Sincerely,

G. F. Gebhart, PhD

President, International Association for the Study of Pain



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## Pain in the Baltics January 16-17, 2009 Reval Hotel Olümpia, Tallinn, Estonia Scientific programme

## January 16, 2009

9.00-10.00	Registration, coffee
10.00-10.10	Welcome
10.15–10.45	Alfredas Vaitkus MD, FIPP Vilnius University Hospital Santariskiu Clinic, Centre of Anaesthesiology, Intensive Therapy and Pain Management, Vilnus, Lithuania Current pain management in Lithuania: system and practice
10.50–11.20	Mihails Arons MD Medical Centre D.A.P. Pain Clinic, Riga, Latvia Current pain management of patients with chronic pain syndrome in Latvia
11.25–11.45	Boris Gabovich MD Pain Service, Department of Anaesthesiology and Intensive Care, East Tallinr Central Hospital, Tallinn, Estonia Current pain management in Estonia
11.50–12.05	Andrei Pavlov MD Department of Anaesthesiology, Regional Municipal Institution Oncological Dispanser of Krivoy Rog, Krivoy Rog, Ukraine Management of chronic pain in the Ukraine
12.10-13.30	Lunch
13.30–14.15	Carl-Olev Stiller MD PhD Division of Clinical Pharmacology Karolinska University Hospital, Stockholm, Sweden The effect of intrathecal morphine in systemic opioid refractory cancer pair
14.25–15.10	Arina Spasova MD PhD Department of Anaesthesiology, Petrozavodsk State University, Petrozavodsk, Russia Experience of using regional blockade in control of chronic pain
15.20–15.50	Janina Buterlevičiūtė MD Institute of Oncology, Vilnius University, Vilnus, Lithuania Cancer pain: recommendations for pharmacological management
15.55–16.25	Coffee break
16.25–16.55	Kestutis Petrikonis MD, PhD Hospital of Kaunas University of Medicine, Clinic of Neurology, Kaunas, Lithuania

Chronic peripheral neuropathic pain: current mechanisms and treatments

### 17.00-17.20 Boris Gabovich MD

Pain Service, Department of Anesthesiology and Intensive Care, East Tallinn Central Hospital, Tallinn, Estonia

Balanced approach in management of peripheral neuropathic pain: case reports

## 17.25-17.40 Maiu Sepp MD

Pain Service, Department of Anesthesiology and Intensive Care, East Tallinn Central Hospital, Tallinn, Estonia

Regional teqhniques as a component of multimodal analgesia treating acute postoperative pain in East Tallinn Central Hospital

## 17.45-18.00 Mall Varvas MD

Women's Clinic, East Tallinn Central Hospital, Tallinn, Estonia Chronic pelvic pain

### 18.05-18.20 Kaire Pakkonen MD

Pain Clinic, Pärnu Hospital, Pärnu, Estonia

Analysis of the activity of the pain clinic in Pärnu Hospital in 2006

19.00 Symposium Dinner

## January 17, 2009

## 9.30-10.00 Coffee

## 10.00-10.45 Eija Kalso MD PhD

Pain Clinic, Department of Anaesthesiology, Helsinki University Hospital, Helsinki, Finland

Chronic post-surgical pain: epidemiology, current mechanisms and treatments

## 10.55-11.40 Yuri Kolesnikov MD PhD

East Tallinn Central Hospital, Tallinn, Estonia

Peripheral analgesics: new and investigational approach to pain management

11.50-12.20 Coffee break

## 12.20-12.50 Inara Logina MD PhD

Riga Stradin's University Hospital, Riga, Latvia

Treatment of neuropathic pain

### 12.55-13.40 Aleksei Korelov MD PhD

Pain Clinic, Department of Anaesthesiology and Reanimatology St. Petersburg Medical Academy of Postgraduate Studies, St. Petersburg, Russia The role of the Adenosin/ATP receptors in chronic pain

13.50-15.00 Lunch

## 13.55–14.25 Estonian Pain Society Meeting (members only)

### 15.00-15.30 Inara Logina MD PhD

Latvian Medical Academy, Riga, Latvia Education in pain management in Latvia

## 15.35–16.05 Daina Jegere MD

Headache Center, Riga Maritime Hospital, Riga, Latvia Chronic daily headache

## 16.10–16.40 Katrin Gross-Paju MD PhD

Center for Neurological Diseases. West Tallinn Central Hospital, Tallinn, Estonia

Placebo and chronic pain

16.50 Closing ceremony

## Current pain management in Lithuania: system and practice

Alfredas Vaitkus - Vilnius, Lithuania

**BACKGROUND AND OBJECTIVES.** The first pain clinic in Lithuania was founded on August 1, 1994. The aim of the study was to summarize all achievements made in this area of medicine in Lithuania up to this time.

**MATERIAL.** Analysis of the current situation in Lithuania regarding pain management system and practice.

**RESULTS.** The first-line contact of pain control consists of family doctors and physicians of other specialties, who can refer their patients to a specialized pain facility. At the current moment there are 7 hospital based pain clinics providing therapeutic and interventional pain management, 2 of them are equipped with C-arm fluoroscopy. Besides, there are several pain cabinets with consul-

ting doctors. In total, about 15 physicians of different specialties are involved in specialized pain management and ~60% of them are anesthesiologists. The total number of visits to pain consultants is about 10.000–12.000/year with about 5.000–6.000/year of interventional procedures. There are several organizations acting in the area of pain medicine. The main among them are: Lithuanian Society of Anaesthesiology and Intensive Care, Lithuanian Pain Society and Association of Pain Clinics.

**DISCUSSION.** Pain management system in Lithuania is in continuing development. Although much has already been achieved, there is still concern regarding improvement in the area of pain education, reimbursement of pain medicines, palliative care and introduction of modern technologies.

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## Current pain management of patients with chronic pain syndrome in Latvia

Mihails Arons, Inara Logina, Igors Panihins, Fjodors Kochkarevs — Riga, Latvia

Therapy and management of chronic pain has attained a new level of development in Latvia at the moment. We are trying to set up and develop multidisciplinary pain clinics with a possibility to provide aid to patients with chronic pain of different etiology and localization, including pharmacological treatment, interventional procedures, physiotherapy, psychotherapy and other methods of management. The Latvian Association for Study of Pain

was founded by Professor J.Berzins in 1995. When in 2005 only 66 specialists belonged to the Association, then nowadays the membership consists of 123 specialists: 56 neurologists, 16 anesthesiologists, 11 specialists of internal medicine, 6 neurosurgeons, 5 oncologists, 6 physiotherapists. Our organization is involved in pain studies of international organizations. Fifty-one of the members are certified algologists under the specialty acknowledged on 24.09.2003 within additional post-graduate education (joint specialty).

At present there are several pain clinics in Latvia. The oldest one situated in Valmiera

was founded by Dr. Ilkens in 1988. A pain unit has been set up in Stradin's University hospital, with an anesthesiologist and a nurse, which is part of the anesthesiology department. Also in Stradin's University there is a neuropathy pain unit, which was founded in 2001 where three neurologists are employed. The first headache center was founded in Vecmilgravis hospital; nowadays there are five headache centers in different towns of Latvia, such as Cesis, Valmiera, Liepaja and Riga. A center of chronic back pain has been functioning in Vecmilgravis hospital since 2004. In 1997 a palliative care center with 25 beds was set up in the Latvian center of oncology. Similar palliative units have also been introduced in regional hospitals. The medical center D.A.P. was founded in 2004. Now there are working anesthesiologists, rehabilitation doctors and a psychotherapist. In December 2008 the SANUM pain center was founded which employs an anesthesiologist, neurologists and a psychologist.

The main problems that we are faced with are the following. Standardization of treatment methods and follow-up is necessary for patients with chronic pain syndromes; financing of pain clinics has to be included in the budget of the national healthcare system; family doctors and other specialists should be informed of the possibilities of pain management in specialized pain clinics and should receive relevant education.

## Current pain management in Estonia

Boris Gabovich - Tallinn, Estonia

Insurance medicine in the Estonian Republic is the only national sick-fund that pays medical institutions for their services according to an approved price list in framework of a contract concluded every year. Medical institutions are economically independent. At the same time, the price for pain treatment is absent. Payment for acute pain control is foreseen as part of overall treatment. Chronic pain treatment – out-patient reception hours are paid on general terms: primary – 20 min.; secondary – 10 min. Blockades and regional anesthesia are paid separately. However, there exists no system of education of doctors in the area of pain control.

Positive developments are 100% reduction in the price for paying for acquisition of analgesics for oncological patients and 50% reduction in the price of medicines for all insured as well as the possibility to receive a single benefit for obtaining auxiliary facilities (corsets, orthosis) and appliances (TENS).

In these conditions the financial support of pain control depends entirely on the free will of leaders of medical institutions and on the enthusiasm of individual doctors.

Pain treatment clinics function in Tallinn, Tartu, Pärnu, Rakvere and Võru; "pain teams" have been set up in two major hospitals. Pain Service is provided in ETCH since 2006, including APS and Pain clinic.

The present system prevents formation of the type of thinking needed for management of the "painless" patient during the whole period of treatment.

Change in the leadership of a hospital or change in the working place of a doctor may suspend or even stop all the work in the area of pain treatment, and depreciate the work of a hospital, a city, or a region.

It is necessary to elaborate a system of educating specialists in the area of pain, to develop and introduce prices for pain control, to recognize pain management as a separate specialty, as well as to develop and implement national standards and requirements for acute pain treatment.

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## Management of chronic pain in the Ukraine

Andrei Pavlov - Krivoy Rog, Ukraine

The number of specialized centers for management of chronic pain in the Ukraine is limited. The work of pain management centers is illustrated on the example of our center. Multi-step medical therapy and stagewise specialized aid in are conducted simultaneously in the Ukraine, which enables to treat pain syndromes most effectively. Stages of provision of aid proceed from a specialist to a specialized center of pain management. Therapy in

specialized pain centers is conducted with the use of medical means and special methods: ipplications, blockades, neurolytic technique.

Management of chronic pain in the Ukraine is in the initial stage of development. There are not many specialized centers for management of pain providing aid to patients stagewise. However, awareness of the problems of patients, availability of enthusiastic doctors and proper organization of medical aid on the whole offer good prospects for development.

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## The effect of intrathecal morphine in systemic opioid refractory cancer pain

Reif, A. Wincent, C. Stiller – Stockholm. Sweden

**AIM OF INVESTIGATION:** To investigate if the addition of morphine in combination with bupivacaine improves pain relief in patients with severe clinically opioid resistant cancer-related pain requiring adjuvant treatment with continuous intrathecal (IT) local anaesthetics.

METHODS: This is a non-commercial academically initiated single site clinical prospective randomised double-blind cross-over study. Patients with severe cancer related pain despite high doses of oral or parenteral opioids were included. These patients received an internalized IT catheter with subcutaneous port, according to a standardized procedure. The position of the catheter tip was verified by x-ray. Bupivacaine was administered by a programmable patient-controlled analgesia infusion pump (PCA). Morphine was added to bupivacaine either on day two or day four. The patients reported pain intensity evaluated

by a 11-point Numeric Rating Scale (NRS) and pain relief using the 5-point Verbal Rating Scale (VRS). In addition the number of PCA bolus doses was monitored. Side effects were registered.

**RESULTS:** 20 patients were included. 5 patients withdrew during the trial due to reasons unrelated to IT drug treatment. No patient withdrew due to side effects. IT bupivacaine (range 18-91mg/24h) decreased the pain intensity in 14/15 patients. NRS assessment showed a decreased pain intensity of 50% or more in 14/15 patients. Additional opioids could be stopped or decreased significantly in most patients. Pain relief was assessed as "good" or "complete" in 12/15 patients. 12/15 experienced no difference in pain relief between day 2 and day 4. Only minor differences in the use of the PCA pump were detected between day 2 and day 4. I.e. comparing the days when morphine was added to bupivacaine or not. Side effects as nausea, itching, drowsiness and somnolence were reported during day 2 or day 4 in a few patients.

**CONCLUSIONS:** Routine use of IT morphine in addition to bupivacaine does not seem to be necessary when using our technique.

**ACKNOWLEDGEMENT:** Stockholm County Council research funds of the Karolinska Institutet.

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## Experience of using regional blockade in control of chronic pain

A. P. Spasova, A. P. Zilber – Petrozavodsk. Russia

**AIM OF INVESTIGATION:** To evaluate the effect of peripheral blockade on pain severity in patients with chronic postoperative pain as well as with polyneuropathic pain against the background of the pathology of the connective tissue.

MATERIALS AND METHODS: The study was conducted on 69 patients aged 22 to 74 years, 48.5% of men and 51.5% of women. The length of pain syndrome ranged from 6 months up to 12 years. The case was chronic pain whose severity did not decrease with the use of standard therapy, which served as indication for application of regional blockade. All patients were provided with necessary clinical, neurologic, and proper X-ray investigations (CT, MRI); and according to definite indications, neurophysiological investigations were provided (ENMG). To rate pain, NRS score system, McGill pain questionnaire (MPQ), DN4, brief pain inventory were used; the degree of manifested concomitant depression was defined on the basis of Zunge Index.

**RESULTS:** The first study group included 52 patients with post-laminectomy pain syndrome; patients` mean age was 38.5±12 years. Peripheral nerve blockade was carried out depending on pain localization; usually

3-5 blockades with a two- or three- day interval were needed. In the end, the rate of pain according to NRS was reduced from 7.9 $\pm$ 1.15 to 0.8 $\pm$ 0.5, number of words chosen (NWC) according to MPQ was reduced from 15.63 $\pm$ 0.47 to 3.1 $\pm$ 0.10.

The second group included patients with phantom limb pain; mean patients` age was 56.8±9.8 years. The length of pain syndrome ranged from1.5 months up to 12 years. Average pain score according to NRS at rest was 8.8±2.2; NWC according to MPQ was 29.5±9.9. Peripheral nerve blockades were carried out depending on pain localization (femoral or sciatic). Severity of pain was reduced in the course of 5-7 days. In the end, it was 2.8±1.1. Reduction of Zunge Index was registered in the range from 61 to 5.

The third group included 5 patients with cryoglobulinemia and painful polyneuropathy of the inferior limb. Pain score according to NRS was 9-10; NWC according to MPQ was 31.5 points. One full blockade (popliteal blockade) provided stable reduction of pain by up to 0-1 points. Hyperpathia and allodynia disappeared, being practically coped with Reyno syndrome.

**CONCLUSION:** Peripheral nerve blockade allows to achieve the quickest pain relief in chronic pain.

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## Cancer pain: recommendations for pharmacological management

Janina Buterlevičiūtė – Vilnius, Lithuania

The aim of the study was to acquaint specialists with new recommendations on pharmacological management of cancer pain.

Most patients with cancer have malignant pain. It is important to assess each specific pain and to identify its likely cause in order to manage it. One of the ways to manage cancer pain is the pharmacological method which involves basic treatment and breakthrough pain treatment. On the basis of the Cancer Pain Relief Program of the World Health Organization, a three-step analgesic ladder has been developed for prescribing certain me-

dicines (non-opioids, weak opioids, strong opioids + adjuvant in all steps). Besides basic and breakthrough pain treatments, regular management of side effects should always be kept in mind (e.g.: constipation, respiratory depression, and others) of the disease. Sometimes cancer pain management can be erroneous. To avoid this, close communication should take place between the patient and the family caregivers and the clinician. There exist specific recommendations on cancer pain management which should be used as guidelines for management of cancer pain in adults and children

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## Chronic peripheral neuropathic pain: current mechanisms and treatment

Kestutis Petrikonis, Arunas Sciupokas – Kaunas, Lithuania

There is no precise information about the prevalence of different types of neuropathic pain (NP). It has been estimated that about 5% of patients with nerve injury, 9% with low back pain, 10-15% after healing of herpes zoster rash, and about 16 % of diabetic patients have symptoms corresponding to NP. The new definition of NP as "Pain arising as direct consequence of a lesion or disease affecting the somatosensory system" as well as the new diagnostic criteria for NP, as 1) localization in peripheral innervation territory area, 2) anamnesis supporting lesion of somatosensory system, 3) clinical/paraclinical confirmation of nerve fiber damage, 4) demonstration of disease or relevant damage, will be powerful tools to establish a clear picture of the problem in near future.

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Search for etiopathogenetic treatment and finding ways to relieve entrapment/compression or reduce inflammation of peripheral nerve is the primary goal of every clinician. However, the traditional classification of NP, based on the etiology or localization signs, is an inadequate instrument for adequate treatment of patients. Otherwise, an opposite way as a symptomatic approach to NP treatment allows to achieve 50% pain reduction for 30–40% patients only.

The most important mechanisms of NP are the following: a) pathological activity in spared nociceptors and axons; b) hyperexitability of second order neurons, loss of segmental and descending modulation of dorsal horn despite lack of activity from the first afferent neuron; c) inflammation of nerve trunk and ectopic activity in primary nociceptors and other sensory afferents (spontaneous pain and allodynia); d) increased sympathetic

activity causing sensitization of nociceptors; e) neuroplastic changes as outcome of neuropathic chronification, which alters evaluation of noxious information in various brain regions. Similar to other chronic pain conditions, NP is influenced not only by biological but also by psychological and social factors.

The modern way of thinking and activity is to search for corresponding mechanisms of NP and to modulate or treat them. One of the possible ways is to diagnose the source and site of NP by administration of the same agent, using different modes (topical, systemic, epidural, intrathecal), to produce pharmacological blockade and to predict successful oral treatment. Recent findings and the understanding of different pain patterns achieved by using quantitative sensory testing (QST) and neurophysiological methods in the group of patients with the same clinical etiology allow to develop new recommendations of NP treatment.

An alternative method employed by us in daily practice is selection of drugs against NP using systematic reviews and guidelines. Indexes of Number need to treat (NNT) and Number need to harm (NNH) are best available to compare drug efficacies and side effects. Calcium channel modifying anticonvulsants, sodium channel blockers, serotonin noradrenalin reuptake inhibitors, opiates, topical lidocain and capsaicin are the most popular and basic medications in NP treatment. Since different drug classes have different mechanisms of action, it is theoretically sensible to combine several agents. Actually, it is often restricted to usage of two drugs because of mutual potentiation of side effects across classes. Therefore, also other treatments of NP like neurostimulation, ablation, physiotherapy, psychotherapy and pain education are very important tools of a comprehensive treatment scheme.

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## Peripheral nerve blockade in management of acute postoperative pain: an Oxford perspective

Svetlana Rutter - Oxford, United Kingdom

Nuffield Orthopaedic Centre in Oxford is a tertiary and international referral hospital, with approximately 7,000 operations a year. Vast majority of operations are performed with some form of local or regional anaesthesia either as a solo technique or as part of a combined technique with general anaesthetic, aiming to provide better postoperative analgesia. We believe that while pain is an expected consequence of surgery, it is a preventable complication of anaesthesia, and poor postoperative analgesia is not acceptable. Despite all the modern advances in anaesthetic practice, a significant proportion, 30 to 80%, of patients still suffer from moderate to severe pain postoperatively (1) with all the negative impact on various systems, as well as with an important risk of developing a chronic pain syndrome. Better pain relief may not necessarily change the surgical outcome but it improves patient satisfaction and decreases certain complications (2).

Recognition of the importance of better control of postoperative pain has led to development of acute pain services (APS) in the USA and Europe. In the UK, the number of hospitals providing APS has increased from 3% in 1990 to 49% in 1996 (3-6), and this figure has grown since. The APS models often depend on available finances and most hospitals can only afford low-cost models (7) when the role of anaesthesiologists ("anaesthetists" in the UK) is limited to teaching and training, supervising and providing advice to acute pain nurses as well as to selecting patients for special pain therapies; the service is effectively nurse-delivered. Our institution is

one of those. Besides, an anaesthesiologist-based comprehensive pain management team is expensive and does not guarantee better service.

Modern postoperative analgesia has moved from on-demand opioids to more effective balanced modalities including sophisticated techniques such as IV PCA (patient controlled intravenous analgesia), continuous central neuraxial (CNBs) and peripheral nerve blocks (PNBs) etc. A recent extensive survey (8) analysed prospective data from 18 925 patients and demonstrated that PCEA (patient controlled epidural analgesia), IV-PCA and CPNB (continuous peripheral nerve block) are safe and efficient. Although all three treatment strategies provide effective analgesia, regional techniques offer superior pain relief.

The choice of techniques depends on proven benefits and recommendations of working parties such as PROSPECT (9, 10) and their suitability for a particular hospital. In our institution the addition of local/regional techniques to other forms of analgesia is greatly encouraged, with daily practices and beliefs continuously changing and improving (11). A technique of choice for continuous central neuraxial block for postoperative pain relief is currently PCEA with low concentration bupivacaine (0.1%) and fentanyl (2 or 5 mcg/ml). The solution is pre-formulated in the pharmacy department, which is an important safety measure. The use of continuous peripheral nerve blocks is limited although such a service is advocated in other institutions for in- and out-hospital settings (12, 13). Postoperative wound infusion is also awaiting its implementation as a valuable modality in selected patients (14).

The efficacy and cost-effectiveness of single-shot PNBs have been demonstrated in many studies. Although they may not provide long-term benefits (15), they are relatively simple and can spare patients from side-effects of opioids for quite a few hours in the immediate postoperative period. Therefore, blocks such as intersacalene, infraclavicular.

lumbar plexus, femoral, sciatic etc are widely accepted and used frequently in our institution, with short- (prilocaine or lignocaine) or long- acting (bupivacaine, ropivacaine) local anaesthetics.

Whenever PNBs are used, safety and success are of paramount importance. Failure of PNBs can be classified as primary and secondary. Expected success rate corresponds well to the actual success of the block, with a tendency to overestimate the likelihood of failure (16). The following strategies lead to better success: improving the knowledge of anatomy and anatomical variations, choosing the block according to the operation, mastering the technique, whether it is ultrasound or nerve stimulator based, improving competency. Small group teaching through advanced regional anaesthesia fellowship programme or workshop based courses such as Oxford Intensive Regional Anaesthesia Course (www.ragbi.org, www.nda.ox.ac.uk) provides further valuable learning opportunities.

In addition, having the support of surgical colleagues is important for successful regional anaesthesia service. It was shown that availability of a regular anaesthetist makes surgeons more supportive of regional anaesthesia and improves their understanding of the benefits (17).

Finally, good medical documentation is a vital part of a successful peripheral nerve block procedure. Besides providing evidence of quality of care, it can provide vital information for post-anaesthetic reviews and facilitate choice for future anaesthetics. In Oxford we designed and introduced a small (70 x 52mm), self adhesive, standardised PNB label which fits the existing anaesthetic chart and is tailored to the requirements of our hospital (18). The use of the "Oxford" PNB label as an aid memoir for correct technique has significantly improved the documentation of the aspects of PNBs directly related to safety and success: initial settings of peripheral nerve stimulator, threshold current, NAPTA (negative aspiration and positive twitch abolition), absence of pain on injection, ease of injection (19). We recommend adopting the standardised "Oxford" peripheral nerve block label in its original or modified form in other hospitals.

In summary, peripheral nerve blocks are simple and invaluable treatment modalities for effective postoperative pain relief and should be an integral part of acute pain service in every hospital.

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## Regional techniques as a component of multimodal analgesia in treatment of acute postoperative pain in East Tallinn Central Hospital

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It is recognized that untreated or poorly managed postoperative pain causes unnecessary dyscomfort, patient dissatisfaction, longer hospital stays, increased expense, and lower than optimal clinical outcomes.

For many years postoperative pain has been treated with systemic opioids despite several adverse effects. Modern multimodal analgesia combines different analgesic drugs to provide more effective pain relief and less side effects than in the case of relying on one drug alone.

Regional techniques are widely used as part of multimodal analgesia. Regional analgesic/anesthetic teqhniques provide multiple possibilities for dynamic pain relief after different surgical procedures to improve clinical outcome and to shorten the hospital stay. This review addresses the usage, advantages and disadvantages of different methods of regional analgesia in postoperative pain management. Different methods of central and regional blocks are described. Rarely used in Estonia, Continuous Wound Infusion technique appears to be very attractive owing to nearly absent side effects, and therefore it definitely deserves wider implementation in postoperative analgesia. All regional techniques require optimal patient selection, well-trained personnel and protocolized care of regional catheters both in the ambulatory and in-hospital environments.

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## Chronic pelvic pain

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Pevic pain is a challenging problem confronting the gynecologist because of its unclear etiology, complex natural history and poor response to therapy. Acute pain is usually intense with rapid onset and indicates an acute pathology that should be evaluated quickly, because delay in diagnosis increases morbidity and mortality.

Chronic pelvic pain is a symptom, not an illness. It refers to pain located in the lower abdomen (below the level of umbilicus) that interfers with normal function and that has lasted for at least 6 months. Chronic pelvic pain is usually associated with depression. Most likely 3 classic vegetative signs of depression are present: psychomotor retardation (agitation), significant weight loss (or gain) while not die-

ting and insomnia (frequently morning sleep is disturbed). Pain is the cause of depression and depression increases pain.

Chronic pelvic pain is a common problem, its various forms affect 10% of women during their lifetime.

The pathophysiology of chronic pelvic pain is complex and multifactorial, usually it remains unclear. Of patients undergoing laparoscopy for chronic pelvic pain 60–80% have no intraperitoneal pathology, nor do they have tissue distortion associating with pain. In patients with no obvious pathology and in those with a pathology that has an equivocal role in pain generation, multidisciplinary therapy is preferable. The approach to women with chronic pain must be therapeutic, optimistic, supportive, and sympathetic.

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## Analysis of the activity of the pain clinic in Pärnu Hospital in 2006

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The Pärnu Pain Clinic was founded 7 years ago as part of the anesthesiology and intensive care unit. Three physicians are currently working in it. Outpatients are consulted twice a week, duration of each visit is 45 minutes.

In the forenoon consultations are carried out in the inpatient section where 2-7 hospitalized patients are consulted a day.

We analysed the results of the year 2006 retrospectively: number of patients' consultations, number of doctors who referred their patients to the consultation, distribution of patients' age and gender, drug combinations used prior to our consultations, need for addi-

tional consultations. For our analysis we used data from the ESTER-database.

In 2006 we had 300 patient consultations in our Pain Clinic, 113 of them were primary consultations, 185 were repeated consultations, and two were home consultations. Most of our patients were referred by GPs and the most complicated cases were severe neuropathic pain and pain due to cancer.

Pain Clinic is a necessary medical unit in our county because of the high prevalence of chronic pain and because specialists of other fields are not ready to deal with pain management. However, very often we have to refer our patients to additional consultations. In order to avoid this, we suggest that patients should receive adequate diagnosis before attending our Pain Clinic.

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## Peripheral analgesics: new and investigational approach to pain management

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The term 'targeted peripheral analgesics' has been suggested to describe analgesics with a mechanism of action that appears to be primarily through reducing pain transmission within the peripheral nervous system. Topical analgesics have many advantages over systemically administered analgesics, including the ability to provide effective analgesia with reduced systemic drug levels, a factor particularly beneficial to the elderly. Topical analgesics differ from transdermal delivery systems in that the latter's goal is to deliver systemic rather than local effects. Currently, the common topical analgesics include capsaicin cream 0.75%, lidocaine/prilocaine (EMLA), and the 5% lidocaine patch. However, many other areas could be targeted for analgesic activity, including peripheral afferents, inhibitory influences, and excitatory mediators.

Many topical agents are commonly used for the treatment of neuropathic pain, despite data being either unavailable or from poor quality randomized, controlled trials. The tricyclic antidepressants, amitriptyline and doxepin, and the NMDA antagonists, ketamine, amantadine, dextromethorphan, and orphenadrine, have been used in an off-label

manner to treat neuropathic pain. Among local anesthetics, lidocaine has been used frequently to provide neuropathic pain relief; in Europe, tetracaine and ropivacaine have also been used. Counterirritants that target transient receptor potential channel protein are in commom use, especially capsaicin. Although originally developed as an antihypertensive agent, the alpha2-adrenergic agonist clonidine has been applied topically to provide pain relief by interrupting the ectopic pulses generated by sympathetic afferent nerves.

More clinical controlled studies are needed to confirm topical approach to the treatment of the peripheral neuropathic pain. There is good evidence supporting the use of topical analgesics in neuropathic pain, especially in view of the typical low incidence of side effects. The best approach may be to use them as part of a multimodal therapeutic program. Based on the current available literature, the strongest analgesic effects for neuropathic pain tend to be observed with lidocaine patch 5%, capsaicin and amitriptyline/ketamine combinations. It is clear at this point that topical analgesia offers a viable alternative as adjuvant therapy for patients with neuropathic pain.

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## Treatment of neuropathic pain

Inara Logina - Riga, Latvia

The definition of pain postulated by IASP (1994) as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage" is now accepted worldwide. Chronic pain has been considered a specific healthcare problem and its physiological mechanisms differ from those of acute pain. One chronic non-malignant type is central and peripheral neuropathic pain initiated or caused by a primary lesion or dysfunction of the nervous system. Neuropathic pain is a complex condition with positive and negative sensory signs and symptoms involving many peripheral and central mechanisms: membrane hyperexcitability, ectopic discharges, peripheral or central sensitization, wind up and reorganization phenomena, loss of inhibitory control. Patients with neuropathic pain experience significant comorbid symptoms such as anxiety, depression, sleep disturbances, functional impairment, what add greatly to the burden of the pain patient.

A new understanding of neuropathic pain has introduced new challenges: to alleviate suffering and to improve the patient's quality of life, to apply the growing knowledge of underlying mechanisms taking into consideration possible poor and varied response to standard treatments. Optimal management must be patient specific, based on etiology, signs and symptoms, and underlying mec-

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hanisms. In many cases it is impossible to treat or modify the underlying condition or etiology. New treatment approach to neuropathic pain includes titrated treatment of symptoms or mechanisms - to reduce pain, to adjust complementary treatment to secondary symptoms - in order to improve physical functioning, to reduce physological distress and to improve overall quality of life. The main pharmacological agents used in neuropathic pain are antidepressants (amitriptyline, imipramine, nortriptyline, duloxetine etc), anticonvulsants (carbamasepine, gabapentine, pregabaline etc), opioids (tramadol, oxycodon, morphine, phentanyl etc), topical agents (lidocaine etc), clonidine, NMDA receptor antagonists and some other drugs. Nonpharmacological options are of great importance - biofeedback, relaxation methods, physical and occupational therapy, cognition/ behavioral strategies, acupuncture, transcutaneous electrical nerve stimulation and other physical therapies. Complex approach to neuropathic pain includes interventional therapies, too: nerve blocks, neurolytic techniques, medical pumps, stimulation methods and so on.

Despite our knowledge and the progress in treatment possibilities, 88% of neuropathic pain patients reported their worst pain as moderate or severe during the past 24 hours, 67% of patients had had neuropathic pain for more than 1 year. This can be explained by the fact that neuropathic pain is acknowledged as a neurodegenerative disorder.

## Role of adenosine/ATP receptors in chronic pain

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Treatment of chronic pain presents high demand for the knowledge of pathophysiological mechanisms of its development. Therefore, the aim of our review was to reveal the mechanisms of chronic pain involving purine receptors.

The network of purine receptors and its natural ligands, in particular adenosine and its phosphorilated derivatives, constitutes one of the components of antinociceptive system of the body. Activation of some purine receptor subtypes leads to change in the activity of nervous system including inhibition of nociceptive transmission. It is important to note that different purine receptors have opposite effects on nervous system. A1-receptors play a crucial role in the antinociceptive ability of purinergic system. However, increased level of adenosine stimulates A2B-receptors and evokes pain sensation, maintaining biological feedback. The same effect can be also achieved by activation of some other subtypes of purine receptors with phosphorilated derivatives of adenosine, in particular adenosine triphosphate is able to activate proalgogenic P2X3-receptors.

As is known, there is a tonic control of nociceptive input by adenosine release in

synaptic space from non-nociceptive fibers. This provides activation of A1-receptors and suppresses nociceptive transmission at least in the dorsal horn. However, nerve injury impairs such adenosine secretion and creates conditions for development of chronic pain called disinhibition.

An important property of adenosine is reduction of ectopic activity manifesting its ability as an anticonvulsant. Application of exogenic A1-agonists promotes such an effect providing analgesia for the above mentioned cases.

However, the clinical significance of the algogenic capacity of purine receptors agonists for chronic pain is not clear. A sharp rise in purine agonists' concentration outside cells that is observed in ischemic regions is accompanied by pain sensation. The latter may be to some extent alleviated by administration of P1-purine receptor antagonists. Yet there is no evidence for use of this method in clinical practice.

Thus, disturbances of purinergic system can contribute to chronic pain. It may be related with either excess or low levels of purines. Therefore, agonists and antagonists of purine receptors possess a great potential as analgesics in patients with chronic pain and may be useful for identification of the mechanisms underlying chronic pain. But nonselective action of these drugs restricts its routine usage at present.

## Education in pain management in Latvia

Inara Logina – Riga, Latvia

Of the adult population in Latvia 19% suffer from chronic pain with moderate or severe intensity (more than 5 points on 10-point NRS) at least 2 times during the past week for at least 6 last months. This was stated in a survey of chronic pain for 2008 using large- scale computer-assisted telephone interviews (5845 calls, 63% non-respondence). On average 47% of those who suffer from chronic pain in Latvia were not satisfied with their pain management. One of the ways to solve this problem is improvement training in pain management. EFIC's Declaration (2001) in "Call to action" clearly points out the methods how to do it.

Development of postgraduate specialisation in pain medicine and certification in this subspeciality, i.e.algology, was carried out in Latvia and the subspeciality (t joint speciality) on pain was acknowledged by Directive No 251 of the Ministry of Health of 24.09.2003. "Bylaws of Speciality of Algology" (number in the classification of specialities - PP16). This year, official documents and bylaws are revised. The core curriculum of postgraduate subspecialisation in pain has been developed in close collaboration with other professional associations. It is a two-year programme containing 80 hours of a theoretical course (lectures) and 200 hours of practical classes, independent studies, presentations of patients etc. At present there are 51 certified pain specialists in Latvia but not all of them currently practising in pain therapy. No financial support was provided by state authorities was until now.

Revision of the primary training of physicians and inclusion of more education on pain, as well as cooperation of healthcare professionals are recommended by IASP and EFIC. Revision of the undegraduate core cur-

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riculum in Riga Stradin's university was performed in 2004 and the mandatory 1 credit point course on pain medicine (lectures and practices) was included in the schedule of the 6-year students of the Medicine Faculty and the 4-year students of the Stomatology Faculty.

Improvement of the knowledge of pain of other medical professionals is also a way how to improve the management of pain patients. For this purpose, a one-day course for residents of all specialisations in RSU was introduced in 2006. Several teaching courses for continuing medical education have been carried out each year. Joint meetings of Latvian Association for Study of Pain and other professional associations as well as lectures for doctors in regional hospitals are popular and have been held regularly. Several guidelines on pain issues were developed in recent years: "Neuropathic pain", "Rational use of farmacotherapy for neuropathic pain", "Headaches", "Low back pain"; "Rational use of pharmacotherapy in oncology". We made some efforts to organize regular publications in local medical periodicals; also several original books on pain have been issued (Ilkens, Logina, Berzins). However, there is an acute need for publishing a textbook on pain in Latvia. Self-education of our pain specialists has been promoted in various ways (congresses, international meetings, courses etc).

Promotion of higher standards in pain care includes several activities. During recent years 3 medical technologies on pain evaluation and investigation were drafted and validated in our country. However, introduction of new techniques and methods of pain therapy (QST, ultrasound and radiologically guided blockades, surgery etc), improvement of the knowledge of pain and pain management among healthcare professional is a crucial issue in long term.

## Balanced approach in management of peripheral neuropathic pain: case reports

Boris Gabovich - Tallinn, Estonia

Treatment of peripheral neuropathic pain that develops after surgery needs a balanced approach. Below we will introduce a description of five cases in the management of which we successfully used local anesthesia as one of components of treatment.

CASE 1. Patient: male, aged 56. Severe pain (VAS 7-8) in the area of postoperative hem 11 weeks after knee joint replacement. The pain irradiates into shank extending to foot. The patient cannot sleep due to pain and is unable to work. Conservative treatment during 7 months using various combinations of medicines, TENS, physiotherapy. Against the background of taking p.d: tramadol (200-400 mg), pregabalin (300mg), mitriptylin (25 mg), zopiclone (7,5 mg) the pain was reduced (VAS 3-4), sometimes VAS 5-6, the patient can sleep, and is able to work. Marked increase in pain after 6 months (VAS 8-9) after the family doctor discontinued treatment. Postoperative hem was infiltrated with local anesthetic (bupivacain). Former conservative treatment was started. Pain free state in 24 hours: 6 more procedures were done. Absence of pain. Remission 5 months (VAS 0-2), conservative treatment is gradually almost stopped: tramadol (50 mg p.d). Pain appeared again after an injury in the hem area. Secondary local treatment (5 procedures) with a constant effect.

**CASE 2.** Patient: male, aged 26. Severe pain (VAS 9-10) in the area of postoperative hem

after lumbotomia. Conservative treatment during 2 years was unsuccessful. Postoperative hem was infiltrated with local anesthetic (bupivacain). Ten procedures were done (each day). After each procedure, pain was reduced. Remission (VAS 3-4) about 4 months. When pain increased, the procedure was repeated (5 times). The change in conservative therapy had almost no influence on the length of remission. Procedures were replaced with lidocain patch.

**CASE 3.** Patient: male, aged 73. Repeated (3 times) amputation of a hip. Phantom pain (VAS 7-8). Conservative therapy had no effect. Seven procedures. Remission (VAS 3-4) 2 months. Pregabalin (150 mg p.d).

**CASE 4.** Patient: female, aged 64. Pain (VAS 8-9) for 4 months after a trauma of a finger. Five procedures. Remission (VAS 1-2) 3 months. Pregabalin (150 mg p.d).

**CASE 5.** Patient: female, aged 53. Professional pianist. Pain (VAS 9-10) for 3 months after the ablation of thumb chondroma. Work incapacity 100%. Seven procedures. Remission (VAS 1-2) 2 months. Second surgery was needed for reestablishing the injured nerve and for contraction correction. Prebagalin (75 mg p.d). Work capacity restored. Lidocain patch is recommended.

Although local treatment is always not so effective, it still deserves attention.

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## Chronic daily headache

## Daina Jegere - Latvia

The term chronic daily headache (CDH) is referred to various primary and secondary headache disorders that occur on more than 15 days per month for more than 3 months. In adults the estimated prevalence of CDH is 4%. In primary CDH no structural or systemic illness could be found using neurological and physical examinations.

Chronic migraine (CM), new daily persistent headache (NDPH), hemicrania continua (HC) and chronic tension-type headache (CTTH) are attributed to primary CDH.

Medication overuse headache has been described in association with episodic migraine, CM, NDPH, HC, and CTTH. Regular and frequent use of analgesics, combined analgetics, ergots, triptans, (3–5 days per week for several months) can cause medication overuse headache. Very often CDH are combined with medication overuse and comorbid psychiatric conditions that include anxiety and depression.

Some secondary headache disorders must be considered in CDH patients. These include mass lesions: subdural hematoma, brain tumor, sinusitis. Metabolic disturbancesanemia, hypothyroidism or medication induced headache – can cause daily headache. Cervicogenic headache and grater occipital neuralgia have features of CDH. Sometimes various types of headaches (primary and secondary) may be combined.

Treatment of CDH is difficult and begins with ruling out potential structural lesion or other organic cause of headache and identification of factors that can be controlled- comorbid conditions, medication overuse. Besides medication therapy, psychological assessment and psychotherapy, biofeedback, and relaxation can be of fundamental value. Most patients with CDH are overusing symptomatic medication and stopping of this medication is the first step of the treatment. Withdrawl symptoms, including nausea, vomiting, agitation, sleep disorders, may last for at least 2 weeks and the patient may need antiemetics or neuroleptics. Short-acting barbiturates and benzodiazepines should be replaced with long-acting ones and be tapered gradually. Symptomatic analgesics are replaced by another group or, in case of migraine, by an abortive medication from the triptan group. The patient can use this drug for a week and then stop it. Some clinicians use a steroid during outpatient detoxification. In addition, triciclic antidepressants and antiepileptics are used as preventive therapy of CDH.

Specialized headache centers are necessary to provide multidisciplinary, coordinated management of hard-to-treat headache syndromes.

## "Pain in the Baltics" abstracts will be published in electronic version of Eesti Arst:

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