Abstracts of 4th International Conference for Pain Treatment

14 - 15 September 2012

Venue:
Touristic Complex “SHARRI” Prevalle, Prizren, Republic of Kosova

http://www.pha-ks.com
Organisational council

Dr. Adem Bytyqi - President of conference

Prof. Dr. Orhan Kubati
Prof. Dr. Mazllum Belegu
Prof. Dr. Nexhmi Hyseni
Prof. Dr. Naser Ramadani
Prof. Dr. Alban Neziri
Dr. Afrim Avdaj Mr. Sci
Dr. Antigona Hasani Dr. Sci.
Dr. Sejran Abdush Mr. Sci
Dr. Mehmedali Gashi
Dr. Genc Muja
Dr. Fadil Krýeziu
Dr. Mehdi Shehu

Dr. Armend Spahiu
Dr. Sejran Skeraj
Dr. Muhamedali Kodra
Dr. Sylejman Nishori
Dr. Suzana Ismeti
Dr. Shpresa Maralushaj
Dr. Sevim Brina
Dr. Xhejlane Sylqe
Myzafer Kalanderi
Fetije Huruglica, MSc
Fekrije Hasani, PgD in public health
Ramiz Bytyqi, BSc, ToN
Bashkim Sylaj Msc cand. – Treasurer

Ma. Agron Bytyqi, BSc, ToN – Secretary of conference

Scientific council

Prof. Dr. Orhan Kubati
Prof. Dr. Nexhmi Hyseni
Prof. Dr. Naser Ramadani
Prof. Less Kiemele
Dr. Alban Neziri, PhD.
Dr. Antigona Hasani Dr. Sci.

Dr. Sejran Abdushi Mr. Sci
Dr. Nehat Baftiu Dr. Sci
Dr. Fadil Krýeziu
Dr. Adem Bytyqi

Ma. Agron Bytyqi, BSc, ToN
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## Friday 14 September 2012

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<tr>
<td>12:00 to 19:00</td>
<td>Registration and reception</td>
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</table>
| 11:00 to 15:00 | Workshop Programme<br>
Les Kiemele, MPAS, PA-C – USA<br>Neuropathic pain (Theoretical and practical demonstration)<br>Regional Hospital ‘Prim. Dr. Daut Mustafa ‘ in Prizren |
| 19:00 to 20:00 | Opening ceremony<br>1. Prof. Dr. Ferid Agani - Minister of Health of Kosovo<br>2. Prof. Dr. Ramadan Muja – President of Municipality, Prizren<br>3. Prof. Dr. Tritan Shehu – Albania<br>4. Dr. Les Kiemele MPAS, PA-C – Mayo Clinic, USA<br>5. Prof. Dr. Mazllum Belegu – President of CME in MoH, Kosovo<br>6. Dr. Sci. Nehat Baftiu – Director of Anesthesiology and ICU Clinic, UCC - Pristina<br>7. Dr. Adem Bytyqi – President of Professional Health Association - Kosovo<br>8. Prof. Dr. Orhan Kubati – President of Scientific Committee. |
| 20:00 to 21:00 | Cocktail                                                                                 |
**Hall A**

**Saturday 15 September 2012**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>07:00 to 09:00</td>
<td>Registration</td>
</tr>
<tr>
<td><strong>Moderators</strong></td>
<td>Prof. Eli Alon, Prof. Nexhmi Hyseni, Prof. Quirino Piacevoli adam</td>
</tr>
</tbody>
</table>
| 09:00 to 09:30| Professor Eli Alon, M.D. – Switzerland  
Opioids in the Treatment of Chronic Pain                                               |
| 09:30 to 10:00| Professor Quirino Piacevoli, M.D.-Italy  
Treatment of Postoperative Pain                                                   |
| 10:00 to 10:30| Professor Nexhmi Hyseni, M.D. - Kosovo  
How to: Construct a good presentation, prepare appropriate slides, prepare and present a poster |
| 10:30 to 11:00| Professor Claudio Lo Presti, M.D.-Italy  
Break Through Cancer Pain: Management and Treatment                                  |
| 11:00 to 11:15| **Discussion**                                                                                                                           |
| 11:15 to 11:30| **Coffee break**                                                                                                                         |
| **Moderators**| Prof. Tritan Shehu, Ass.Prof. Serpil Ustalar Özgen, Prof. Jordan Nojkov, Prof. Dr. Alban Neziri                                            |
| 11:30 to 12:00| Ass.Prof. Serpil Ustalar Özgen, - Turkey  
Perioperative Pain in Children                                                      |
| 12:00 to 12:30| Les Kiemele, MPAS, PA-C – USA  
The advantages of the use of the CT scanner in the interventional Procedures of the Neuropathic Pain |
| 12:30 to 13:00| Professor Jordan Nojkov, M.D.-Macedonia  
The Combination of Tramadol&Paracetamol versus NSAID-s in treatment of Chronic Pain |
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<thead>
<tr>
<th>Time</th>
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<tr>
<td>13:00 to 13:30</td>
<td>Prof. Dr. Alban Neziri – Switzerland</td>
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<tr>
<td></td>
<td>Central Hypersensitivity in Chronic Pain Patients: Manifestations, Assesment and Translational Aspects</td>
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<tr>
<td>13:30 to 13:45</td>
<td>Discusion</td>
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<tr>
<td>13:45 to 15:00</td>
<td>Lunch</td>
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<tr>
<td></td>
<td>Moderators</td>
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<tr>
<td></td>
<td>Dr. Antigona Hasani Dr. Sci, Dr. Halil Algan, Dr. Sejran Abdushi, Dr. Apostol Vaso</td>
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<tr>
<td>15:00 to 15:30</td>
<td>Dr. Halil Algan, Turkey</td>
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<tr>
<td></td>
<td>What we know about Pain Management: old versus new</td>
</tr>
<tr>
<td>15:30 to 16:00</td>
<td>Dr. Apostol Vaso-Albania</td>
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<tr>
<td></td>
<td>The advantages of the use of the Scanner in the interventional Procedures of the Neuropathic Pain</td>
</tr>
<tr>
<td>16:00 to 16:30</td>
<td>Dr. Sejran Abdushi Mr. Sci-Kosovo</td>
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<td>ST- Segment Elevation on ECG in adults with chest Pain</td>
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<tr>
<td>16:30 to 17:00</td>
<td>Dr. Antigona Hasani PhD Kosovo</td>
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<td>The role of Intravenous Acetaminophen in Acute Pain Management</td>
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<tr>
<td>17:00 to 17:15</td>
<td>Dr. Sadri Hulaj-Kosovo</td>
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<td></td>
<td>Pain in injuries with explosive materials</td>
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<tr>
<td>17:15 to 17:30</td>
<td>Dr. Adem Bytyqi, M.D., Kosovo</td>
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<tr>
<td></td>
<td>Postoperative Analgesia at Children after General Anesthesia with Ketamine</td>
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<tr>
<td>17:30 to 17:40</td>
<td>Yllka Kotori – Albania</td>
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<tr>
<td></td>
<td>Dhimbjet dhe natyra e tyre ne komunitetin qe jeton ne zonen e kontaminuar me merkur ne qytetin e Vlores.</td>
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<tr>
<td>17:40 to 17:50</td>
<td>Gentiana Mehmeti-Kosovo</td>
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<tr>
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<td>Stenosis of mitrale valve and its treatment</td>
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<tr>
<td>17:50 to 18:00</td>
<td>Discusion end of the session</td>
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</table>
### Saturday 15 September 2012

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
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<tbody>
<tr>
<td>20:00 to 00:00</td>
<td>Gala Dinner</td>
</tr>
<tr>
<td><strong>Hall B</strong></td>
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</tr>
</tbody>
</table>
| 09:00 to 09:30 | Les Kiemele, MPAS, PA-C, Ass.Prof. Arzu Irban, Dr. Nehat Baftiu, Dr. Sci, Ma. Agron Bytyqi  
When Pain has no Purpose: Understanding Neuropathic Pain |
| 09:30 to 10:00 | Ass.Prof. Arzu Irban, Turkey  
Ozone Therapy for Pain Management |
| 10:00 to 10:30 | Dr. Nehat Baftiu, PhD, Kosovo  
Headache is a result of dural puncture after spinal anesthesia |
| 10:30 to 10:45 | Discussion |
| 10:45 to 11:00 | Coffee break |
| 11:00 to 11:30 | Professor Orhan Kubati, Professor Myftar Barbullushi, Dr. Catagay Ozturk  
Management of pain during and after eye surgery |
| 11:30 to 12:00 | Professor Myftar Barbullushi  
Pain paradox at urinary infections |
| 12:00 to 12:30 | Dr. Catagay Ozturk – Turkey  
Is there any place for minimal invasive surgery in thoracolumbar fractures management |
<p>| 12:30 to 12:40 | Discussion |
| 12:40 to 14:00 | Lunch |</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>Moderator</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00 to 14:15</td>
<td>Dr. Haxhire Gani, Dr. Afrim Avdaj Mr. Sci, Dr. Snezana Janchevska</td>
<td>Expression and assessment of the fifth vital sign in newborn babies</td>
</tr>
<tr>
<td>14:15 to 14:30</td>
<td>Dr. Haxhire Gani, Albania</td>
<td>Intravenous Paracetamol role on post operative pain</td>
</tr>
<tr>
<td>14:30 to 14:45</td>
<td>Dr. Neset Uzairi, Macedonia</td>
<td>Pain in general, Treatment of pain in patients with Cancer – supportive and palliative therapy</td>
</tr>
<tr>
<td>14:45 to 15:00</td>
<td>Dr. Afrim Avdaj Mr. Sci, Kosovo</td>
<td>Treatment of emergency cases with abdominal pain in Regional Hospital of Prizren</td>
</tr>
<tr>
<td>15:00 to 15:15</td>
<td>Dr. Skerdi Zahaj</td>
<td>The Mechanisms of the Relationship between Chronic Pain Catastrophization and Symptoms of Post-traumatic Stress Disorder</td>
</tr>
<tr>
<td>15:15 to 15:30</td>
<td>Dr. Islam Bytyqi, Kosovo</td>
<td>Caudal Epidural block in Children</td>
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<tr>
<td>15:30 to 15:45</td>
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<td><strong>Discussion</strong></td>
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<tr>
<td>15:45 to 16:00</td>
<td></td>
<td><strong>Coffe break</strong></td>
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<tr>
<td>16:00 to 16:15</td>
<td>Tuba Sungur, Florie Gjonbalaj, Agron Bytyqi</td>
<td>Tuba Sungur-Turkey Our Experience In Acute Pain Service</td>
</tr>
<tr>
<td>16:15 to 16:30</td>
<td>Ma. Agron Bytyqi-Kosovo</td>
<td>Postoperative Pain management in Regional Hospital of Prizren</td>
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<tr>
<td>16:30 to 16:45</td>
<td>Vjollca Shpata-Albania</td>
<td>Effect of postoperative analgesia on nutritional support of</td>
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<tr>
<td>Time</td>
<td>Speaker</td>
<td>Topic</td>
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<tr>
<td>16:45 to 17:00</td>
<td>Florie Gjonbalaj-Kosovo</td>
<td>Treatment of pain in children following (adenoid) tonsillectomy*</td>
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<tr>
<td>17:00 to 17:15</td>
<td>Anisa Zeqja-Albania</td>
<td>Pain caused anxiety in diabetic neuropathy suffering persons</td>
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<tr>
<td>17:15 to 17:30</td>
<td>Abdullah Gruda-Kosovo</td>
<td>Impact of headache on quality of life in patients with migraine</td>
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<tr>
<td>17:30 to 17:45</td>
<td>Denada Selfo –Albania</td>
<td>Turbullimet e kujdesi infermieror</td>
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<tr>
<td>17:45 to 18:00</td>
<td></td>
<td><strong>Discussion and closing Ceremony</strong></td>
</tr>
<tr>
<td>20:00 to 00:00</td>
<td></td>
<td>Gala Dinner</td>
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**Conference Hall**

<table>
<thead>
<tr>
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<th>Event</th>
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<tbody>
<tr>
<td>10:00 to 13:00</td>
<td>Round table discussion, Organizational Committee and Lecturers Conclusions and Recommendations of the Conference</td>
</tr>
<tr>
<td>13:00 to 14:00</td>
<td>Working Lunch</td>
</tr>
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</table>
Të ndëruar kolegë

Asociacioni Shëndetësorë Profesional në bashkëpunim me Ministrin e Shëndetësisë, IASP-në, EFIC-un, QKUK-në, Spitalin Rajonal të Prizrenit si dhe shumë partnerë të tjerë kanë kënaqësinë t’iu ftojnë në Konferencën e 4-të Ndërërkombëtare mbi Trajtimin e Dhimbjes me 15 shtator 2012 në kompleksin turistik ”Sharri” në Prevallë - Prizren.

Ne fillim po ju informoj lidhur me aktivitet qe i ka zhvilluar Asociacioni Shëndetësorë Profesional nga konferenca e kaluar (e treta) e deri tani:

- ASHP, dega e dhimbjes me datën 7 dhjetor të 2011 u pranua si anëtare në formim nga Shoqata Ndërërkombëtare për studimin e dhimbjes (IASP) me seli ne Washington. Me 29 Maj të këtij viti në Kopenhagen u be pranimi zyrtar i ASHP-së në Shoqatën Evropiane e degëve te IASP-se (EFIC) me seli ne Bruksel, e renditur në vendin e 36-të ndër anëtarët tjerë të bashkimit evropian.


Pra këto janë vetëm disa nga sukseset e ASHP-së, ku besoj se edhe në takimet tjera të karakterit profesional dhe shkencor do të jemi prezent me më shumë punime. Te gjitha këto suksesë do te jene një shtyje për punën tonë të mëtutjeshme të shoqatës. Sa i përket trajtimit të dhimbjes, pérveç katër konferencave si dhe tri punëtorive, kryetari i shoqatës ka marrë pjesë aktive në përpilimin e udhërrëfyesit dhe protokollit për trajtimin e dhimbjes te të sëmurët në mjekimin paliativ, që është një hap fillestar drejt zhvillimit të trajtimit të
dhimbjes si problem jo vetëm shëndetësor por edhe social dhe ekonomik.

ASHP do të angazhohet që në bashkëpunim me Ministrinë e Shëndetësisë, Arsimit dhe strukturat tjera politike dhe shoqërore të fus në programin arsimor të shkollës së mesme të lartë të mjekësisë dhe në fakultetin e mjekësisë dhe atë të infermierisë lëndën e menaxhimit të dhimbjes si lëndë në vete. Po ashtu që edhe në kuadër të edukimit të specialistëve mjekësorë në Ministrinë e Shëndetësisë të krijohet plan-programi për edukimin e specialistëve të dhimbjes (algolog).

Temat të cilat do të trajtohen në konferencën njëditore do të shtjellojnë diagnostifikimin dhe trajtimin e dhimbjes akute dhe kronike në këndvështrimin e përgjithshëm dhe specifik. Moto e kësaj konference është “Viti global kundër kokë-dhibmbjes” sipas IASP-së.

Shfrytëzoj rastin që të falinderoj Ministrinë e Shëndetësis, Kuvendin Komunal te Prizren-it, Spitalin Rajonal të Prizrenit, Spitalin Acibadem nga Turqia, Spitali Amerikan me seli ne Prishtine, IHC Qendra Diagnostikuëse, kompanitë farmaceutike si: Kompanine Roche, FarmItalia, Koslabor si dhe partnerët e tjerë.

Shpreshojmë qe konferenca përveç anës shkencore do të jet e dobishme edhe në shoqërimin ndërmjet kolegëve nga vendet e ndryshme. Në emër të këshillit organizativ të konferences ju ftoj zyrtarisht që të merrni pjesë në këtë aktivitet.

Ju dëshirojë qaste të mira në konferencë, në qytetin e lashtë të Prizrenit, dhe në kompleksin turistik “Sharri”, Prevallë.

Kryetari i Konferencës

Dr. Adem Bytyqi – Anesteziolog &Intensivist
Dear colleagues

Professional Health Association in cooperation with the Ministry of Health, IASP, EFIC, UCC, Regional Hospital of Prizren and many other partners have the pleasure to invite you at 4th International Conference on Pain Treatment on September 15, 2012 at the touristic complex "Sharri" in Prevalla - Prizren.

At first, to inform you about activity that has developed by Professional Health Association from last conference (third) so far:

- PHA, pain section on December 7, 2011 was accepted as a chapter in formation from International Association for the Study of Pain (IASP) headquartered in Washington. On 29 May of this year in Copenhagen became official acceptance of PHA in the European Federation of IASP Chapters (EFIC) with headquarters in Brussels, ranked in 36th place among the other members of the European Union.
- On August 26-31 in Milan was held 14th World Congress on Pain. By PHA were presented three poster presentations; 1. Dr. Alban Neziri - a member of the PHA, lives and works in Switzerland, 2. Dr. Adem Bytyqi - President of PHA and 3. Agron Bytyqi –Secretary of PHA.

So these are just some of the successes of the PHA, where I believe that on other professional and scientific character meetings we will be present with more works/studies. All these successes will be a push to further our work of the association. Regarding the treatment of pain, in addition to four conference and three workshops, the president of the association has actively participated in the development of guidelines and protocols for the treatment of pain at patients in palliative medicine, which is an initial step towards the development of pain treatment not just as a health problem but also as social and economic.
PHA will work in cooperation with the Ministry of Health, Education and other political and social structures to bring into the program at high school education of medicine and in the medicine and nursing faculty the subject of pain management as a subject in itself. Also even within the education of medical specialists in the Ministry of Health to establish education curriculum for pain specialists (algologist).

Topics that will be addressed in this one-day conference will argue the diagnosis and treatment of acute and chronic pain in the general and specific view. Moto of this conference is “Global year against headache” according to IASP.

I take this opportunity to thank the Ministry of Health, Municipality of Prizren, Regional Hospital of Prizren, Acibadem Hospital from Turkey, American Hospital based in Prishtina, IHC Diagnostic Centre, pharmaceutical companies like: Roche, FarmItalia, Koslabor and other partners.

We hope that the conference in addition to the scientific side of the jet also will be helpful in the association between colleagues from different countries. On behalf of the Organizational Conference Council, I formally invite you to participate in this activity.

We wish you a pleasant stay in the conference, in the ancient city of Prizren, and at touristic complex "Sharri" in Prevalla.

President of Conference
Dr. Adem Bytyqi – Anesthesiologist & Intensivist
Chronic pain: a disease in its own right

Professor Eli Alon, M.D.

Professor of Anesthesiology and Lecturer University of Zurich, Switzerland
Director Pain Control Unit Beder Str 80, 8002 Zurich, Switzerland
Past-President and Honorary Member of the Swiss Association for the Study of Pain
Executive Board Member of The European Federation of IASP Chapters EFIC
Former Chairman Department of Anesthesiology Regional Hospital of Lugano, Switzerland
Organizer and invited speaker in National, European and International Congresses
Author of books, proceedings, original and review articles, book chapters, and abstracts.

Pain is a major healthcare problem in Europe. Although acute pain may be considered a symptom of disease or injury, chronic and persistent pain is a specific healthcare problem, a disease on its own right.

Acute pain, such as that following trauma or surgery, constitutes a signal to a conscious brain about the presence of noxious stimuli and/or ongoing tissue damage. This acute pain signal is useful and adaptive, warning the individual of danger and the need to escape or seek help. Acute pain is a direct outcome of the noxious event, and is reasonable classified as a symptom of underlying tissue damage or
disease. However, in many patients pain persists long after its usefulness as an alarm signal has passed, and indeed, often long after the tissue damage has healed. Chronic pain in these patients is probably not directly related to their initial injury or disease condition, but rather to secondary changes including ones that occur in the pain detection system itself. In addition to being due to different physiological mechanisms than acute pain, chronic pain often sets the stage for the emergence of a complex set of physical and psychosocial changes that are an integral part of the chronic pain problem and that add greatly to the burden of the pain patient.
Treatment of postoperative Pain

Quirino Piacevoli, M.D.PhD.
Professor and Head Department of Anaesthesia and Intensive Care
A.C.O. San Filippo Neri, Rome

The postoperative pain (POP) is one of the most significant acute pain present in the hospital for its prevalence, its social costs and for the emotional impact it has on the surgical patient.

The postoperative pain control is an inalienable right of the patient.

It is recognized that an adequate treatment of POP contributes significantly to the reduction of perioperative morbidity, assessed as incidence of postoperative complications, costs and days of hospitalization, especially in patients at high risk (ASA III-V), and in patients who underwent major surgery.

Therefore the optimal treatment of POP can accelerate the recovery of the patient after major surgery, bypassing or reducing the hospitalization in ICU.

The treatment of the POP is an important part of therapeutic strategies of the "perioperative medicine”.

Proper planning of the treatment of POP must take into account:

a) patient characteristics
b) type and technique of surgery

c) estimate of intensity and duration of POP.

d) organization of existing resources

e) identification and training of personnel involved.

Therefore the best planning of POP needs to be sensitive to the clinical context in which it is applied. Pain control regimens should not be standardized; rather they are tailored to the needs of the individual patient (taking into account medical, psychological, and physical condition), age, level of fear or anxiety, surgical procedure; personal preference, and response to agents given.

The major goal in the management of POP is minimizing the dose of medications to lessen side effects while still providing adequate analgesia. This goal is best accomplished with a multimodal analgesia.

Surgical pain is due to inflammation from tissue trauma (ie, surgical incision, dissection, burns) or direct nerve injury (ie, nerve transaction, stretching, or compression).

Tissue trauma releases local inflammatory mediators that can produce augmented sensitivity to stimuli in the area surrounding an injury resulting in sensitization of peripheral pain receptors (primary hyperalgesia) and an increased excitability of neurons of the central nervous system (secondary hyperalgesia) and/or a misperception of pain to non-noxious stimuli (alldynia).
**Treatment:**

Pain intensity can be reduced by directly by local anesthetics or using various drugs like opioids, nonsteroidal anti-inflammatory agents, adjuvants (eg, ketamine, clonidine, paracetamol, gabapentin, pregabalin, etc.)

This reduces the hormonal response to surgical injury, and indirectly decreasing pain receptor activation.

Synergism between medications decreases the dosages needed and helps avoid the unwanted effects associated with the higher doses that would be required if only a single agent was used.

A correct POP can be obtained using different techniques, the most universally accepted are:

- **Systemic Analgesia:** The drugs used in the treatment of postoperative pain are acetaminophen, the FANS/COX-2, weak opioids, strong opioids and local anesthetics associated, or not, with adjuvants. Such drugs can be used individually or in combination with each other, for exploit the different mechanisms and sites of action.

- **Epidural Analgesia**

- **Techniques of LRA and Continuous Peripheral Blocks**

- **Continuous Surgical Wound Infiltration**

- **Patient Controlled Analgesia (PCA)**

- **Preemptive Analgesia.**
The advantages of the use of the ct scanner in the interventional procedures of the neuropathic pain

A. Vaso1, A.Gjika

The Clinique “Galenus”, Tirana, Albania

Introduction:

The micro invasive procedures of the treatment of the pain in the majority of the pain treatment centres thorough the world are performed by means of the fluoroscopic technique. In our practice, we have modified these procedures by replacing above technique, with the application of the CT scanner technique. We have assumed that the modification has some significant advantages.

Objectives:

The promotion of the application of the CT scanner technique in the micro invasive procedures of the treatment of the neuropathic pain.

Methods:

Micro invasive procedures of the treatment of the neuropathic pain of 342 cases, performed by our multidisciplinary staff (radiologists, anaesthesiologists, psychologists and physiotherapeutists).
Results:

The use of the CT scanner in the treatment procedures of the neuropathique pain reveals significant advantages against the traditional methods:

1. Imaging resolution is quite better
2. The roentgen radiation dosage of the patient and that of the secondary ionized of the manipulator is reduced considerably.
3. Above items enable more careful and stresses manipulations.
4. The modified procedure might increase the number of the collaborators, so that the procedure doesn't remain in the condition of an individual manipulation.
5. As a consequence;
   a. The premises of the precision during the procedure are improved.
   b. The confirmation of the diagnosis among the interested medical staff is facilitated

Conclusions:

The professional advantages as well as the patient benefits are more significant than the disadvantage of the higher cost and suggest CT scanner to be used routinely in the treatment procedures of the neuropathique pain.
Break Through cancer Pain: Management and Treatment

Claudio Lo Presti, M.D.
Director of Pain Unit and Palliative Care
A.C.O. San Filippo Neri, Rome

For BTcP, described for the first time by Portenoy and Hagen in 1990 in patients with cancer, we mean a painful episode of sudden and transient extremely high intensity that occurs spontaneously or in relation to specific stimuli, foreseeable or unforeseeable, and that bursts violently on the stable condition of analgesia induced by basal therapy with opioids properly administered at fixed times (ATC).

It’s a heterogeneous painful condition, distinct from pain base of which commonly suffers the cancer patient, characterized by rapid onset and short duration. It is a severe lancinating pain that can occur in any stage of the disease.

The BTcP is usually related, also with regard to the location, to the pain base and comes with multiple episodes throughout the day, and its frequency varies considerably.

Despite its self-limiting nature, the BTcP is considered a health and social problem of primary importance for the significant negative effect it has on the patient because it interferes with their daily activities, limits their autonomy and alters the psychological balance increasing levels of anxiety and depression. Moreover if not properly
evaluated and treated is a burden for the NHS with an increase in the number of visits, with longer and repeated hospitalizations. The BTcP results be present also in children with cancer pain, while in adults it was found a prevalence of 65%.

The BTcP is usually characterized by multiple parameters such as location, intensity, temporal characteristics, relationship with ATC therapy, triggers, predictability, physiopathology, etiology, and predictive factors. Is classified according to its etiology in pain caused directly or indirectly by cancer and according to its physiopathologie is divided into somatic pain, visceral, or mixed.

A review of the European Palliative Care Research Collaborative (EPCRC) describes several subtypes of BTcP:

- Idiopathic (spontaneous), Incident (caused), from the end of dose (End Dose Pain).

The subtype Incident is distinct into:

- Involuntary, caused by unexpected causes (eg cough) and not predictable
- Voluntary and therefore predictable (caused by patient’s activities or voluntary movements)
- Procedural (predictable and non-spontaneous).

Despite the claims of the EPCRC, it is increasingly recognized that the end dose pain, the predictable pain and the procedural pain should not be included among the subtypes of BTcP, as well as patients with a not well controlled pain base or with a high intensity episodes of pain during titration of opioids cannot be considered affected by BTcP.
From the above it follows that the BTcP is a painful condition heterogeneous, distinct from the pain of the base, which has its precise characteristics and also important for diagnosis, namely: unpredictability, rapid onset, severe intensity, short duration (15-60 minutes), repetition in the day (3-4 episodes), high interindividual (from patient to patient) and intraindividual (from episode to episode) variability.

Considering that the BTcP is an entity characterized by various factors is evident the need to customize the treatment with continuous revaluations over time.

The main treatment consist in drugs as needed administered, and the ideal drug should have: Rapid effect; Easy route of administration; Rapid elimination; Good tolerability; Few side effects.

The opioid with rapid onset (ROO) are considered the drugs of first choice in BTcP.

The transmucosal fentanyl formulations, such as buccal or sublingual or intranasal, are currently the most suitable drug for the treatment of BTcP, as they offer considerable advantages both from the pharmacokinetic (rapid absorption, high bioavailability and effectiveness) that compliance site (route of administration easy and much appreciated by patients).
The combination of tramadol & paracetamol versus nsaids in treatment of chronic pain

Jordan Nojkov,
Clinic for Orthopaedic Surgery, Medical Faculty, Skopje, Macedonia

Pain is not a single disease but is rather a symptom of many medical conditions. Around a quarter of population experiences clinically significant acute pain every year. Chronic pain of moderate to severe intensity occurs in 19% of adults, seriously affecting their daily activities, social and working lives. Among those osteoarthritis and rheumatoid arthritis combined is the most common cause of pain (42%). One in five people with pain report chronic pain from deteriorated or herniated discs, degeneration or fractures of spine. Trauma or surgery causes chronic pain in 15%. Migraine headaches occur in less than 10%. Only 1 – 2% of people with pain report cancer as a cause of their pain.

Most people with chronic pain had not received pain specialist treatment and 40% had inadequate management of their pain.

**Pharmacologic approaches to pain management**

Pharmacologic treatment is the mainstay of pain therapy. Almost half of individuals who suffer from pain choose a non-prescription analgesic as their initial choice for pain relief. Up to 1/5 of population
takes an OTC or prescription analgesic on a daily basis. As with types of pain, multiple systems for classifying analgesics exist. In the below system, analgesics are broadly categorized as:

Nonopioid analgesics (nonopioids):
- paracetamol, metamizole
- nonsteroidal anti-inflammatory drugs (NSAIDs) such as diclofenac, ibuprofen, naproxen, ketoprofen etc. A subgroup of NSAIDs are selective COX II inhibitors also known as coxibs among which are celecoxib, rofecoxib etc. Another subgroup is salicylic acid derivatives, such as aspirin.

Opioid analgesics (opioids): includes drugs such as morphine, fentanyl, tramadol, codeine and many others (cannabinoids, ketamine). These may be further divided to:
- weak and strong opioids
- short-acting and long-acting opioids
- full agonists and partial agonists-antagonists

Adjuvant analgesics: a diverse group of drugs, with primary indications for conditions other than pain, with analgesic properties relevant to some conditions. These may be used to enhance the analgesic effect or to reduce the adverse effects of opioids.

Commonly used adjuvant analgesics include:
- antidepressants,
antiepileptic drugs (pregabaline, gabapentine)
local anaesthetics (LAs)
and also: corticosteroids, biphosphonates, clonidine, antiemetics or laxatives.

**Place of tramadol and paracetamol in clinical practice**

On the WHO ladder tramadol is a second choice drug for treatment of moderate to severe pain. Although WHO guideline is obsolete and a set of new guidelines for treatment of different types of pain are being developed, this WHO guideline is still valid and used as the main international reference. In these tramadol is placed on the second step of the three-step ladder along with codeine. Like tramadol the combination of tramadol & paracetamol is a second step analgesic on the three-step ladder. Since it is relatively new it is only expected to finding its position in the guidelines to come in the future.

It was agreed that guidelines are not universally accepted by those involved in pain management, and pain treatment seems to be driven mainly by tradition and personal experience. Other factors include poor communication between patients and physicians, the side effects of analgesic drugs, and limited individualisation of therapy. Difficulty in maintaining the balance between adequate pain relief and acceptable tolerability, particularly with strong opioids, can lead to the establishment of a ‘vicious circle’ that alternates between lack of efficacy and unpleasant side effects, prompting discontinuation of treatment.
Central Hypersensitivity in Chronic Pain Patients: Manifestations, Assessment and Translational Aspects

Alban Y. Neziri, MD, DSci, PhD

Institute of Anesthesiology University Hospital of Zürich, Zürich, Switzerland

Tissue damage induces profound changes in the central processing of sensory stimuli that lead to exaggerated pain responses (central hypersensitivity) [1]. The literature consistently shows an increased pain reaction after sensory stimulation of healthy tissues in chronic pain, which indicates that central hypersensitivity is present in these patients [2]. Objective evidence for widespread spinal cord hypersensitivity in chronic pain patients has been provided [3].

Clinical manifestations of central hypersensitivity are pain after innocuous stimuli, exaggerated pain after suprathreshold stimulation and enlargement of referred pain areas. These phenomena are clinically relevant and are likely to contribute significantly to pain and disability. Pain responses after applying various experimental pain modalities, i.e. multi-modal sensory testing approach has been established in human pain research [4]. These different modalities are used to determine the efficacy of analgesics in clinical studies and to explore different aspects and mechanisms of nociception[5]. Central
hypersensitivity is deemed to be important in the generation and maintenance of chronic pain and can be detected by various quantitative sensory and electrophysiological tests [6-8].

Translation of current knowledge on central hypersensitivity into benefits for patients is still limited by the sparse available data. However, reference values have been defined for a variety of sensory tests [9, 10]. These data may be used for detecting central hypersensitivity in individual patients. An important further perspective is the development of treatment strategies that are based on the quantification of central hypersensitivity in individual patients.

References


What we know about pain management: old versus new

Dr. Halil Algan
Acibadem Hospital Pain Management Department, Istanbul, Turkey

Chronic pain is a major health problem. It effects nearly 85% of the population sometime during their life. Traditional medical education curriculum is insufficient to deal with this most serious health problem. Billions of dollars spent each year for the treatment of this problem and they often end up with inadequate results. Chronic pain not only effects the patient alone but also it effects the family, business etc. It is a problem that must be approached with a new and unconventional medical perspective.

Modern pain management paradigms start with questioning of pain of every patient that admits to any healthcare center; from doctor’s offices to major hospitals. Next step is diagnosing the source(s) of pain with the usual neurological and radiological techniques and more importantly, the use of diagnostic pain management techniques.

Last step is treating the chronic pain properly. Modern medicine is growing rapidly and new treatment options are now available for chronic pain syndromes once thought untreatable. But majority of patients in western countries are still inadequately treated for their
chronic pain despite all efforts of implementing education and awareness programs, both for doctors and patients.

This lecture will try covering all these issues and hopefully will try to give a perspective for the proper treatment of chronic pain.
Management of pain during and after eye surgery

O. Kubati, M.Ajeti-Kubati, N. Salihu, & B. Zhuri

**Aim**: Eye as a very important organ connects outside world with the brain. Eye is protected with his adnexa and is innervate with a huge amount of nerves which alarm for every sensation including pain too.

Because of this every surgical intervention especially intrabulbar interventions are followed by anxiozity, fear of pain, fear of success rate after operation.

We have analyzed pain during and after vitrectomy. On previous meetings we have analyzed pain on strabological surgeries, cataract surgery and LASIK surgery.

**Method**: Ophthalmic branch of n.trigeminus, and partly maxilar branch supply with sensitive nervous endings eye, orbit and ocular adnexa. There is no connection between sensory innervations on retina, optic nerve and nociceptiv eye sensitivity. These ocular structures are responsible for luminous perception, divided from tactile and dolorous receptors.

On the other side cornea is supplied with sensory nervous endings on two levels: plexus epithelialis and stromalis. Conjunctiva and uvea, especially iris have a lot of nociceptiv receptors.
We have analyzed pain before, during and after vitreoreoretinal surgery. We have selected 40 patients on which vitrectomy was performed:

- 20 cases with 20 gauge, half of them performed under local anesthesia. 10 other cases are performed under general anesthesia.
- 20 cases with 23 gauge, half of them performed under local anesthesia. 10 other cases are performed under general anesthesia.

For local anesthesia we have used 5 ml Marcain 0.5% combined with 5 ml of lidocain 2%, total 10 ml. Intravenously Fentanil, klormidal. Endotracheal anesthesia was performed during total anesthesia.

Age 20-90.

Systemic diseases; Diabet, AHT.

**Results:**

- From 10 patients operated with local anesthesia with 20 gauge vitrectomy, 3 patients have had pain during retrobulbar anesthetic injection, others have had moderate pain. During operation 2 patients have had moderate pain on others there was no pain. After operation there was no pain in all patients. One day post op. all patients have had moderate eye pain.
- Patients operated under general anesthesia with 20 gauge vitrectomy have had pain after operation. One day post op all patients have had moderate eye pain.

- From 10 patients operated under local anesthesia with 23 gauge vitrectomy 2 cases complain during retrobulbar anesthetic injection and instillation of trocars. One of them have had pain during surgery, after and one day after operation nobody complained.

- 10 patients have had 23 gauge vitrectomy under general anesthesia. After operation 2 patient have had pain. One day post op there was no pain in all patients.

**Conclusion:** Since patients with retinal diseases on which vitreoretinal surgery is needed are mostly elder patients with different systemic diseases, local anesthesia appliance is golden standard. With new technologies like 23-25 gauge vitrectomy known as suturless vitrectomy pain threshold is decreased on minimum.
Infants and children frequently receive inadequate treatment for their postoperative pain due to some misconceptions about pain, its management in children. As recently as the 1980s, clinicians were still questioning whether neonates and infants experience pain. Research over the past 2 decades, however, has provided incontrovertible evidence that not only do neonates experience pain but that unrelieved pain has adverse long-term consequences, including harmful neuroendocrine responses, disrupted eating and sleep cycles, and increased pain perception during subsequent painful experiences.

Undertreatment of pain in children has several reasons including difficulty with pain assessment, insufficient research, inadequate knowledge, fear of opioid side effects.

An enormous expansion of the breadth of techniques for acute pain management in children, the establishment of pediatric pain services, and the investigation and introduction of innovative modalities of therapy all attest to the importance accorded to this aspect of perioperative care.
Nociceptive pathways in the periphery, spinal cord, and brain develop in a series of stages through the second and third trimester in humans. Sensory nerve terminals in skin generate from 7 weeks of gestation. By 22-29 weeks, they spread to all body surface. In neonates, pain impulses are transmitted along non-myelinated C fibres, whose responses are not very specific and precise. By 26 weeks' postconceptual age there is sufficient maturation of peripheral and spinal afferent transmission for the late-gestation fetus or preterm neonate to respond to tissue injury or inflammation with withdrawal reflexes, autonomic arousal, and hormonal-metabolic stress responses. There are also changes in responsiveness after injury or repetitive stimulation indicative of central sensitization. In general, preterm neonates have reduced thresholds for withdrawal to noxious thermal and mechanical stimuli compared with older infants and children.

More recently, investigators have begun to examine indices suggestive of cortical activation in response to noxious events. Using near-infrared spectroscopy, Slater and coworkers have shown that a unilateral heelstick (performed for clinical purposes) produces signal changes suggestive of contralateral cortical activation.

Autonomic nerves and motor nerves develop by 6-10 weeks, whereas descending inhibition from brain develop much later.

**Pain Assessment**

The standard for pain assessment has been a self-report in which the
child is asked to quantify the severity of the pain between 0 (no pain) and 10 (maximum pain). Many children lack the cognitive skills to use a 0 to 10 numeric scale, therefore pain assessment measures have been developed that include developmentally appropriate self-report tools, behavioral-observational tools, and physiological-biological measures.

For children to use numeric scales, they must understand the concepts of magnitude and ordinal position, that is, they must be able to identify which of different-sized objects is bigger and place them in order from smallest to largest. Additionally, they must be able to arrange geometric figures or numbers in a series. These skills are typically not present until 7 years of age; thus, several pain assessment tools have been developed that facilitate self-report of pain in young children.

Faces pain scales, the Wong Baker Faces Pain Scale has been extensively studied and its reliability and validity confirmed in children aged 3 to 18 years.

The Oucher, the numerical rating component has been used successfully in children older than 6 years, its use requires that the child be assessed to determine whether he or she can count to 100.

The Manchester Pain Scale, was designed to overcome the gender and ethnic biases of the Oucher. Additionally, it has verbal descriptors of the extent of pain and how it interferes with normal functions.
Pieces of Hurt Tool, an ordinal rating scale composed of four red poker chips, each representing a piece of hurt, it was developed for use in children between 4 and 7 years of age, it has been used in children 3 to 18 years of age.

Visual Analog Scale, (VAS), is also available however, when using such scales it is important to be sure the denominator the child is using.

Selection of a self-report tool for a child requires careful consideration of the age, and cognitive and developmental level of each child.

In many cases, it may be necessary to complement self-reported pain scores with behavioral observations, particularly in preschool-aged children. Despite several age-appropriate methods for self-report, children may still be unable or unwilling to report their pain, and pain assessment in these children relies on observations of behaviors. These ‘pain behaviours’included facial expression, vocalization/cry, leg posture, body posture, and motor restlessness. Behavioral measures of pain include behavior checklists that provide a list of pain behaviors that are marked as present or absent and the extent of pain is estimated on the basis of the number of behaviors present at the time of the assessment.

Children's Hospital of Eastern Ontario Pain Scale (CHEOPS), is a behavioural rating scale, and is cumbersome and impractical to use in a busy clinical setting.
Face, Legs, Activity, Cry, Consolability Scale (FLACC) and the CHEOPS is recommended for assessment of pain associated with medical procedures, the FLACC for postoperative pain by von Baeyer and associates.

Accurate pain assessment in children, requires careful consideration of the context of the behaviors. Input from the parents or caregivers may be valuable, although some parents may lose objectivity in such a situation. Similarly, a regular caregiver may best assess older children with significant developmental delay. When in doubt regarding the source of distress, a trial of analgesics is appropriate and may be both diagnostic and therapeutic.

**Strategies for Pain Management**

Effective treatment of pain requires the use of multimodal therapies that target multiple sites along the pain pathways. Analgesics with additive or synergistic effects yet different side effect profiles should be selected so that adequate analgesia can be provided with the least side effects. Thus, pain can be treated at the peripheral level using local anesthetics, peripheral nerve blockade, nonsteroidal anti-inflammatory drugs (NSAIDs), or opioids. At the spinal cord level it can be treated with local anesthetics, opioids, and α2 agonists, and at the cortical level opioids can be used. Most cases of moderate to severe pain are best treated with a combination of analgesic techniques.

The strategy for postoperative pain management is an integral part of
the preanesthetic plan so that informed consent for necessary procedures such as placement of peripheral or regional blocks can be obtained. Additionally, appropriate teaching for techniques such as patient-controlled analgesia (PCA) can begin in the preoperative period.

Common methods of pain management available for pediatric patients are as follows;

1. Paracetamol
2. Non-steroid anti-inflammatory drugs (e.g. diclofenac, ketorolac)
3. Opioids (e.g. morphine)
4. Intravenous morphine infusion
5. Patient controlled Analgesia (PCA)
6. Regional analgesia
7. Topical e.g. EMLA cream/lignocaine gel
8. Wound infiltration
9. Peripheral nerve block
10. Epidural infusion of local anesthetic / opioid

1. **Paracetamol (Acetaminophen)**

Acetaminophen is the most common antipyretic and nonopioid analgesic used in children. It exerts its analgesic effects by blocking central and peripheral prostaglandin synthesis, reducing substance P–induced hyperalgesia, and modulating the production of hyperalgesic
nitric oxide in the spinal cord. Slow and unpredictable absorption of acetaminophen after rectal administration results in variable blood concentrations, with peak values being reached between 60 and 180 minutes after administration. The total daily dose of acetaminophen via any route should not exceed 100 mg/kg for children, 75 mg/kg for infants, 60 mg/kg for term and preterm neonates older than 32 weeks postconceptual age, and 40 mg/kg. The recommended dose for oral administration is 10 to 15 mg/kg every 4 hours. An oral loading dose of 30 mg/kg followed by a maintenance dose of 10 to 15 mg/kg has also been recommended for quicker onset of action. Acetaminophen has a wide margin of safety when administered in the recommended therapeutic dose range. However, hepatotoxicity has been reported with doses only slightly above the recommended 10- to 15-mg/kg/dose orally for a total of five doses or 50 to 75 mg/kg/day, suggesting that acetaminophen may have a narrow therapeutic index or preterm neonates younger than 32 weeks postconceptual age.
2. Non-steroid anti-inflammatory drugs (e.g. diclofenac, ketorolac)

NSAIDs provide excellent analgesia for mild to moderate pain due to surgery, injury, and disease. These drugs inhibit the enzyme cyclooxygenase (COX), reduce the production of prostaglandins at the site of tissue injury, and diminish the inflammatory cascade.

Ibuprofen, one of the oldest orally administered NSAIDs, has been used extensively for treatment of fever and pain related to surgery, trauma, arthritis, menstrual cramps, and sickle cell disease. A large, controlled, randomized, double-blind study reported superior analgesia with ibuprofen compared with acetaminophen or codeine in children presenting to the emergency department with acute pain after musculoskeletal trauma. The recommended dose of ibuprofen is 6 to 10 mg/kg every 6 hours.

Diclofenac provides effective analgesia after minor surgical procedures in children. It is available only as an oral tablet in the United States, but it is available as a suppository and in the injectable form in several countries. The pediatric dose of diclofenac is 1 mg/kg every 8 hours orally, rectally, or intravenously. Diclofenac is an excellent analgesic for minor surgery; however, like other NSAIDs, it may increase the risk of bleeding after tonsillectomy. Data suggest that the use of NSAIDs during or after tonsillectomy is best avoided and alternative analgesics such as acetaminophen and tramadol be considered to reduce opioid requirements.
Another contentious issue regarding NSAIDs relates to their effects on bone healing and their use in children undergoing spinal fusion. Prostaglandins play an integral role in bone metabolism and significantly influence bone resorption and formation; however, their effects on bone formation predominate. NSAIDs inhibit the formation of prostaglandins, thereby raising the concern that they could promote nonunion after spinal fusion.

Ketorolac and indomethacin are the only injectable NSAIDs available in the United States. Indomethacin is the only NSAID used for closure of patent ductus arteriosus in preterm neonates. Ketoprofen, diclofenac, and ibuprofen lysine are other injectable NSAIDs that are available outside the United States.

Ketorolac has been shown to provide postoperative analgesia similar to opioids in children of all ages. Ketorolac has potent analgesic, anti-inflammatory and antipyretic activities. It has marked peripheral and central antinociceptive actions, but lacks effect on opioid receptors. Its advantage is that it does not depress respiration, causes no sedation and no nausea and vomiting. It carries risks of platelet dysfunction, gastrointestinal bleeding, and renal dysfunction. It can be used alone or in combination with opioids or regional block. It is recommended for short term management of postoperative pain.

Recommended Dosage and Duration of Ketorolac Therapy in Children

Intravenous
Initial dosage 0.5 mg/kg

Subsequent 1 mg/kg 6 hr.ly or IV infusion 0.17 mg/kg/hr

Max daily dosage 90 mg

Max Duration 2 days

Oral

Oral dosage 0.25 mg/kg

Max daily dosage 1 mg/kg

Max Duration 7 days

Not recommended for use in infants <1 year old

Ibuprofen can be given orally

Dosage is 5-10 mg/kg, 6-8 hourly.

Nonopioid analgesics may be used as sole agents for the treatment for mild pain and as important adjuncts for the multimodal treatment of moderate to severe pain. Whereas most nonopioid analgesics produce dose-dependent responses, they are limited by a ceiling effect, that is, a concentration is reached above which no additional analgesia is achieved. Pain cannot be managed with these drugs alone. Therefore, they are frequently prescribed in combination with opioids with the intent to reduce opioid requirements and side effects.
**Oral Dosing Guidelines for Commonly Used Nonopioid Analgesics**

<table>
<thead>
<tr>
<th>Medication</th>
<th>Individual Dose for Children &lt; 60 kg (mg/kg)</th>
<th>Individual Dose for Children ≥ 60 kg (mg)</th>
<th>Dosing Interval (hr)</th>
<th>Maximum Daily Dose for Children &lt; 60 kg (mg/kg)</th>
<th>Maximum Daily Dose for Children ≥ 60 kg (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaminophen</td>
<td>10–15</td>
<td>650–1000</td>
<td>4</td>
<td>75[**]</td>
<td>4000</td>
</tr>
<tr>
<td>Ibuprofen</td>
<td>6–10</td>
<td>400–600</td>
<td>6</td>
<td>40</td>
<td>2400</td>
</tr>
<tr>
<td>Naproxen</td>
<td>5–6</td>
<td>250–375</td>
<td>12</td>
<td>24</td>
<td>1000</td>
</tr>
<tr>
<td>Diclofenac</td>
<td>1</td>
<td>50</td>
<td>8</td>
<td>3</td>
<td>150</td>
</tr>
<tr>
<td>Ketorolac [*]</td>
<td>0.5</td>
<td>30</td>
<td>6–8</td>
<td>2</td>
<td>120</td>
</tr>
<tr>
<td>Tramadol</td>
<td>1–2</td>
<td>50</td>
<td>6</td>
<td>8</td>
<td>400</td>
</tr>
</tbody>
</table>


Ketorolac should be administered for a maximum of 5 days or 20 doses up to 15 mg per dose for children ≤ 50 kg or 30 mg per dose for children > 50 kg.

3. **Tramadol**
Tramadol is a synthetic analogue of codeine that exerts its analgesic properties by two complementary mechanisms. One of its metabolites has a weak affinity for the μ opioid receptor with no affinity for the δ or the κ receptors. In addition to its mild opioid effects, it also inhibits serotonin and norepinephrine uptake. Its main advantages over opioids include reduced incidences of respiratory depression, sedation, nausea, and vomiting. Additionally, because it does not inhibit prostaglandin synthesis, it does not cause the side effects commonly reported with NSAIDs, including peptic ulceration and renal and platelet dysfunction. Side effects associated with its use include nausea and vomiting, pruritus, and rash. Tramadol is available only in tablet form alone or in combination with acetaminophen in the United States. However, it is available in a liquid formulation, as a suppository, and as an injectable solution in other countries, allowing for greater flexibility of dosing. Tramadol is used for postoperative pain treatment in children undergoing ambulatory surgery and has also been used when transitioning from IV opioids to oral analgesics. Two doses of tramadol (1 mg/kg and 2 mg/kg orally) were compared in children who were being transitioned from morphine via PCA. Children who received 2 mg/kg required fewer supplemental analgesics with no difference in side effects compared with those who had received 1 mg/kg. Tramadol appears to be an analgesic of medium potency with a low incidence of side effects that may be used alone for mild to moderate pain and for its opioid-sparing effect in children with severe pain.
4. **Opioid Analgesics**

Opioids are indicated for moderate to severe pain after surgery or trauma, for acute painful crisis in children with sickle cell disease, as well as for chronic painful conditions such as cancer.

Morphine is the opioid that is most commonly used as first-line therapy for moderate to severe pain in children and as such is the agent with which clinicians have the greatest experience.

**Opioid Analgesics: Relative Potency and Initial Dosing Guidelines[*]**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Potency Relative to Morphine</th>
<th>Oral Dose</th>
<th>Intravenous Dose</th>
<th>PO:IV Dose Ratio</th>
<th>PO:IV Dose Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine</td>
<td>1</td>
<td>0.3 mg/kg q3-4hr</td>
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<td></td>
<td>5–7</td>
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<td></td>
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<td>Sustained release:</td>
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<td></td>
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<td>20-35 kg: 10-15 mg q8-12hr</td>
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<td></td>
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<td>35-50 kg: 15-30 mg q8-12hr</td>
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<td></td>
<td></td>
<td>Bolus: 0.1 mg/kg q2-4hr</td>
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<tr>
<td></td>
<td></td>
<td>Infusion: 0.03 mg/kg/hr</td>
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<td>1:3</td>
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<td></td>
<td></td>
<td></td>
<td>1:6</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>for opioid-naive child</td>
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<tr>
<td></td>
<td></td>
<td>Hydromorphone</td>
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<tr>
<td></td>
<td></td>
<td>Bolus: 0.02 mg/kg q2-4hr</td>
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<tr>
<td></td>
<td></td>
<td>Infusion: 0.006 mg/kg/hr</td>
<td></td>
<td>1:4</td>
<td></td>
</tr>
</tbody>
</table>

[*] Source: [Opioid Analgesics: Relative Potency and Initial Dosing Guidelines](#)
**Fentanyl**

- **Bolus:** 0.5–1 μg/kg q1–2hr
- **Infusion:** 0.5–2 μg/kg/hr

**Codeine**

- **0.1-1.5 mg/kg q4-6hr**
- **NA**

**Oxycodone**

- **1-1.5 mg/kg q4-6hr**
- **NA**

**Hydrocodone**

- **1-1.5 mg/kg q4-6hr**
- **NA**

**Methadone**

- **1 mg/kg q6-12hr**
- **0.1 mg/kg q6-12hr**
- **1:2**

**Oxymorphone**

- **0.03 mg/kg q4-6hr**
- **NA**

**Nalbuphine**

- **0.3 mg/kg q2-4hr**
- **50-100 μg/kg q2-4hr**
- **4-5:1**

---

* Recommended doses are for infants >6 months of age. For younger infants, reduce initial doses to 25% of these doses and increase as needed.

† Methadone has a long half-life and can accumulate, causing delayed sedation or respiratory depression. If sedation or respiratory depression occurs, doses should be withheld until sedation resolves. Then the drug is restarted at a smaller dose and extended dosing interval.

Oral administration of opioids at regular intervals can lead to reasonably constant blood levels if dosed appropriately. Oral opioids are well tolerated and are suitable for children experiencing mild to moderate pain, for those who undergo outpatient surgery, or as adjuncts to a regional anesthetic technique. Codeine and oxycodone are two of the most commonly prescribed oral opioids. Both are available in a variety of formulations either alone or in combination with acetaminophen, ibuprofen, or aspirin. Our strong preference is to avoid prescribing codeine in almost all situations, for several reasons. First, in recommended doses, it is a weak analgesic overall. Second,
since it is a prodrug, which requires conversion to morphine, there is marked developmental and pharmacogenetic variation in this conversion, commonly resulting in ineffective conversion and occasionally in overdosage. Third, when dosing is escalated, the frequencies of side effects such as nausea, vomiting, constipation, and dysphoria are common. Oxycodone, on the other hand, causes significantly less nausea and vomiting and is usually better tolerated by the postoperative child just resuming oral intake. Both codeine and oxycodone are available in liquid form, making them easy to prescribe for infants and young children. Codeine elixir is available in combination with acetaminophen (120 mg acetaminophen and 12 mg of codeine in 5 mL). Oxycodone is available in 1-mg/mL and 20-mg/mL strengths. Although the different formulations allow flexibility of dosing, extreme caution is required in prescribing and dispensing to avoid a potentially lethal overdosage. The 1-mg/mL strength is easy to dose and administer even in infants. The larger strengths should be reserved for older children with chronic pain issues and should rarely be required for the treatment of acute postoperative pain.

Methadone is a synthetic opioid with a very prolonged elimination half-life (mean of 19 hours) in children between 1 and 18 years of age and a large bioavailability (~80%) after oral administration. Oral or IV methadone has been considered a good alternative to the use of continuous opioid infusions because repeated dosing at intervals of every 4 to 8 hours can achieve relatively stable plasma drug
concentrations. Although it is used most frequently to facilitate weaning opioid-tolerant children, it has also been recommended for postoperative analgesia and for transitioning children from parenteral to oral opioid therapy. Methadone is especially useful for children with cancer or other serious illnesses who require a long-acting oral opioid.

Intermittent IV injections with opioids of short or moderate duration administered on an as-needed basis (pro re nata or prn) do not achieve a stable blood level and predispose to periods of excessive sedation alternating with periods of inadequate analgesia. Yet this technique remains the most common method of treating postoperative pain in many centers. A partial solution to this problem is prescribing the drug to be administered at closer intervals such as 2 hourly and the use of a “reverse-prn” schedule, in which the medication is offered at the prescribed interval but the child can choose to take it or refuse it. Children should be assessed frequently with the goal of administering the next dose before the recurrence of moderate to severe pain it is available in an elixir formulation.

Intermittent IV injections with opioids of short or moderate duration administered on an as-needed basis (pro re nata or prn) do not achieve a stable blood level and predispose to periods of excessive sedation alternating with periods of inadequate analgesia. Yet this technique remains the most common method of treating postoperative pain in many centers. A partial solution to this problem is prescribing the
drug to be administered at closer intervals such as 2 hourly and the use of a “reverse-prn” schedule, in which the medication is offered at the prescribed interval but the child can choose to take it or refuse it. Children should be assessed frequently with the goal of administering the next dose before the recurrence of moderate to severe pain. Continuous IV opioid infusions are an excellent means of providing analgesia to children with moderate to severe pain who are unable to use PCA, such as infants, young children, and those who are cognitively impaired or physically disabled. Additionally, rescue doses of IV opioids may be required for breakthrough pain. Opioids, however, cause a dose-dependent respiratory depression by shifting the carbon dioxide response curve, reducing its slope, and decreasing the hypoxic ventilatory response. Residual and synergistic effects of sedatives and hypnotics in the early postoperative period further increase the risk of opioid-induced respiratory depression, particularly in preterm and term infants due to age-related differences in elimination and clearance of opioids and other sedating medications. Therefore, the rate of the infusion should be carefully selected based on the child's age, comorbidities, and clinical condition. Additionally, children who receive opioid infusions should be monitored and assessed frequently for depth of sedation and respiratory rate. The onset of sedation is an important clinical index of incipient respiratory depression and should alert the nursing staff and physicians to decrease the infusion rate and observe the child more closely. Use of continuous pulse oximetry is widely recommended for continuous opioid infusions in opioid-naive children and other children at
increased risk for respiratory depression. Another method of IV opioid delivery is via PCA. Intermittent intramuscular (IM) and subcutaneous injections of opioids are obsolete because they are frightening and unpleasant for children and are often perceived as worse than the pain for which they are administered.

Morphine is the opioid most commonly used for postoperative analgesia and has been extensively studied in all pediatric age groups. After major abdominal, thoracic, and orthopedic surgery, children who received continuous morphine infusions had reduced pain scores compared with those who received intermittent IM or IV injections.

Opioids should be carefully titrated in these infants in a monitored environment with significantly reduced continuous infusion rates. Based on pharmacokinetic modeling and morphine clearance predictions, a target morphine concentration of 10 ng/mL can be achieved with morphine infusions ranging from 5 μg/kg/hr in term neonates to 16 μg/kg/hr in 1- to 3-year-old children. Morphine infusions of 10 to 30 μg/kg/hr yielded mean serum concentrations of 10 to 22 ng/mL with rare respiratory depression.

Recently, a “microdose” naloxone infusion (0.25 μg/kg/hr) was shown to reverse the incidence of both nausea and pruritus without affecting the analgesia or opioid consumption.

Fentanyl may be a useful substitute for morphine in children who have hemodynamic instability and in whom any decrease in
peripheral vascular tone is undesirable, as well as for those who
cannot tolerate the histamine release caused by morphine.
Additionally, its quick onset of analgesia makes it ideal for children
with severe escalating pain who require rapid pain relief.

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have hemodynamic instability and in whom any decrease in
peripheral vascular tone is undesirable, as well as for those who
cannot tolerate the histamine release caused by morphine.
Additionally, its quick onset of analgesia makes it ideal for children
with severe escalating pain who require rapid pain relief. Fentanyl is
metabolized by the liver into an inactive metabolite, norfentanyl,
which is excreted via the kidneys. It is 80 to 100 times more potent
than morphine. Although its elimination half-life is significantly less
than that for morphine, its elimination half-life after chronic infusion
increases exponentially as a result of growing tissue storage. Like
morphine, the elimination half-life of fentanyl in neonates is nearly
twice that in adults, predisposing them to a greater risk for
accumulation compared with older infants. As with morphine, any
impairment of hepatic blood flow further decreases the ability to
conjugate

fentanyl in very young infants.

Fentanyl is known to cause all of the side effects reported with
opioids, including pruritus, nausea, vomiting, constipation, and
sedation. Respiratory depression and chest wall rigidity, however, are
its most feared side effects.

Hydromorphone has a spectrum of action similar to that of morphine. Adult opioid equipotency data suggest that it is 3.5 to 7 times as potent as morphine.

Meperidine is an opioid that has been used clinically for many years. Its potency is approximately one tenth that of morphine. Accumulation of its active metabolite, normeperidine, which has CNS stimulant properties, places children at risk for seizures. Therefore, its use has been restricted to the treatment of postoperative shivering or rigors after amphotericin. Although its short-term use continues by some clinicians for procedural sedation and analgesia, it is preferable to use other analgesics for this purpose. Meperidine is not recommended for PCA or as a continuous infusion in children.

5. **Regional Blockade and Analgesia**

The use of local anesthetics, both with and without the addition of central neuraxis opioids and other adjuncts, offers many advantages in the postoperative setting. Blockade with long-acting local anesthetics can provide postoperative analgesia for outpatient surgery so that a child can be discharged home in comfort. Reducing or eliminating the need for systemic analgesics diminishes the potential for side effects associated with their use.
With the recent advances and improvement in techniques of pain management and a better knowledge of pharmacology of drugs in children, pain management can be safely provided to neonates, infants and children and it should be part of pediatric anesthesia.

<table>
<thead>
<tr>
<th>Drug</th>
<th>Demand Dose (μg/kg)</th>
<th>Lockout Interval (min)</th>
<th>Continuous Basal Infusion (μg/kg/hr)</th>
<th>4-Hour Limit (μg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine</td>
<td>10–20</td>
<td>6–15</td>
<td>0–20</td>
<td>250–400</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>2–4</td>
<td>6–15</td>
<td>0–4</td>
<td>50–80</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>0.5</td>
<td>6–10</td>
<td>0–0.5</td>
<td>7–10</td>
</tr>
</tbody>
</table>

**References**

1. **Pediatric Acute Pain Management Handbook.** Dr Felicia Lim SiewKiau. Department of Anesthesiology and Intensive Care. UniversitiKebangsaan Malaysia Medical Centre.
2. **Cote Pediatric Anesthesiology**
Peripheral arterial disease: when leg pain is not musculoskeletal pain

Les Kiemele, MPAS, PA-C
Assistant to Physician
Instructor of Medicine, College of Medicine, Mayo Clinic

Background and aims:

Atherosclerotic vascular disease is a leading cause of death in the Western world, and is becoming more prevalent in Europe and Asia. Peripheral Arterial Disease (PAD), a common symptom of atherosclerotic vascular disease, is associated with significant morbidity and mortality and is a strong predictor of myocardial infarction, stroke and death. PAD is the least recognized form of atherosclerosis and many patients are not properly diagnosed nor optimally treated. This basic overview will define PAD, identify wound characteristics unique to ischemic ulcers caused by PAD, and describe medical interventions to optimally care for patients with this serious condition.

Objectives:

- Define peripheral arterial disease (PAD)
- Identify the principles of wound healing
- Identify factors that delay wound healing
- Identify characteristics unique to ischemic ulcers caused by PAD
- Discuss clinician’s role in treating ischemic ulcers.

**Methods:**

Medical literature search regarding peripheral arterial disease.

**Results:**

Arterial wounds are the most problematic wounds and are very painful. They are caused by vascular insufficiency or trauma and occur distally on the feet. They have discrete wound edges and gangrene is generally present. The pain is severe and relieved with dependency. The skin is thin, shiny and dry. Dependent redness and elevation pallor are typical. Distal pulses are not palpable. Healing will not occur until adequate blood flow is reestablished.

**Conclusion:**

Remember the principles of wound healing and the factors that slow healing of ischemic wounds

Use the right treatment for the right wound

Help the patient make important lifestyle changes

Keep ischemic wounds dry and infection-free

Arterial ulcers will not heal until adequate perfusion has been
reestablished.

References:

- Mohler ER. Clinical features, diagnosis, and natural history of lower extremity peripheral arterial disease. http://www.uptodate.com/patients/content/topic.do?topicKey =~bRhDzg8iotC8ZJ
- Procedure Guideline Assessment of Arterial ulcers VUWHC, Mayo


• Wilson PW. Overview of the risk factors for cardiovascular disease. [http://www.uptodate.com/online/content/topic.do?topicKey=chd/36840&selectedTitle=1~150&source=search_result](http://www.uptodate.com/online/content/topic.do?topicKey=chd/36840&selectedTitle=1~150&source=search_result)

The role of intravenous acetaminophen in acute pain management

Antigona Hasani MD, MSC, PhD
American Hospital Kosova, Prishtina, Republic of Kosova

Acetaminophen (Paracetamol) is one of the most widely used antipyretic and analgesic drugs worldwide. In November 2010, the United States Food and Drug Administration granted approval for the use of a new intravenous formulation of acetaminophen for: 1) the management of mild to moderate pain; 2) the management of moderate to severe pain with adjunctive opioid analgesics; and 3) the reduction of fever in adults and children (age ≥2 years). It is believed to be centrally active, producing analgesia and antipyresis by inhibiting cyclooxygenase (COX) in the hypothalamus [1]. From animal studies, its antinociceptive effects reflect a combination of peripheral and central actions resulting from COX-2 inhibition [2, 3].

Our experience with intravenous acetaminophen started months ago. The following analyses were conducted: effects of gender, age, surgical site, ASA class; sum of pain hours; preemptive analgesic effect; combination with the other analgesics and adverse effects.

Intravenous acetaminophen efficacy and safety appeared to be unaffected by specific subset variables. Our update confirms previous findings that combining acetaminophen with the other analgesics provided clinically useful levels of pain relief in about 45% of
patients with moderate to severe postoperative pain. The combination extended the duration of analgesia more than one hour compared to treatment with the same dose of acetaminophen alone. Side effects and complication were negligible.

References:


Abbott FV, Hellemans KG. Phenacetin, acetaminophen and dipyprone: analgesic and rewarding effects. Behav Brain Res 2000; 112: 177-86.

Patients presenting to the emergency department with chest pain should be triaged for early reperfusion therapies based on their initial electrocardiogram (ECG). The earlier the reperfusion, the greater the benefit, and the time to treatment is now considered to indicate the quality of care.

The American College of Cardiology and American Heart Association guidelines for diagnosis and management of ST-elevation myocardial infarction (MI) state that ST elevation of 1 mm or more in two contiguous leads is suspicious for MI. These days, when thrombolytic treatment and percutaneous intervention are carried out so readily, it is important to remember that acute infarction is not the only cause of ST-segment elevation. The purpose of this review is to describe cases which are manifested with ST-segment elevation and emphasize electrocardiographic clues that can be used to identify the causes of ST-segment elevation.
I would like to present our experience about the place of minimal invasive surgery in thoracolumbar fractures management. The overall management principles for treating spinal injuries focuses on maximizing clinical outcome by obtaining and maintaining spinal stability and optimizing neurologic function. An optimal treatment method should reduce the detrimental effects of injury, reduce pain and suffering, improve functional outcome and quality of life, provide the best outcome with the least amount of associated morbidity. The disadvantages of traditional open surgery are increased infection rate, high blood loss and several approach-related morbidities like postoperative pain, iatrogenic muscle denervation, increased intramuscular pressures, ischemia, revascularization injury. Standard midline posterior approach can lead to paraspinal muscle atrophy, scarring, decreased extensor strength and endurance. These may result in significant source of postoperative pain and functional impairment in the recovery period as well as long term. We can divide minimally invasive techniques in the treatment of thoracolumbar trauma into
osteoporotic and nonosteoporotic patients. In osteoporotic patients without neurological deficit; we can do indirect reduction and kyphoplasty, indirect reduction and titanium vertebral body stent or percutaneous cement augmented pedicle screw fixation and kyphoplasty or titanium vertebral body stent. In the presence of neurological deficit; anterior decompression with mini open or endoscopic route is necessary. In nonosteoporotic patients without neurological deficit; percutaneous pedicle screw fixation only or percutaneous pedicle screw fixation and percutaneous balloon-assisted end plate reduction and augmentation with graft are treatment options. Anterior endoscopic or mini open decompression and stabilization provides anterior decompression, anterior column reconstruction in the presence of neurological deficit. It can be applied as stand alone procedure or with supplemental posterior tension fixation for burst type thoracolumbar fractures. Posterior percutaneous segmental pedicle screw fixation provides posterior tension band effect, indirect augmentation of anterior column and augmentation of anterior fixation. When we compare the traditional kyphoplasty versus titanium implant in osteoporotic patients, literature says, the biomechanical properties of the 2 techniques are similar. There is a significantly greater amount of cement used in the kyphoplasty as compared to the titanium implant group. In addition, titanium implant maintains anterior vertebral height significantly better than the kyphoplasty. In thoracolumbar fractures in osteoporotic patients without neurological deficit, bone cement augmented posterior percutaneous pedicle screw fixation and titanium
vertebral body stent is used especially in flexion-distraction type injuries and in burst fractures with flexion-distraction component. For same injuries in nonosteoporotic patients however, surgical options include, indirect reduction and posterior percutaneous pedicle screw fixation or percutaneous balloon-assisted augmentation of fracture by allo or autograft. Indications for vertebral augmentation technique are deficiency of anterior bone stock detected on CT, vertebral body height loss of more than thirty per cent, sagittal index greater than fifteen degrees but less than twenty five degrees. If none of above in flexion-distraction type injuries; only percutaneous PSF to provide tension band effect is performed. The use of autogenous bone graft instead of bone cement is a promising method to prevent neurological deficit and thermal effects related with cement application. Bone graft placement into the kyphoplasty cavity promotes the bony healing. The removal of instrumentation after bone healing preserves the motion segments since the fusion is not performed (6 months) provides minimal invasive fracture treatment without fusion. There is high risk of collapse of fractured vertebra. So, to prevent this; we use external brace for at least 3 months if one-level above-below fixation was done or no external brace if two-level above-below fixation was performed. It is known that long segment fusion is stronger and stiffer than short segment fixation however it sacrifices spinal motion. In the presence of neurological deficit and in the presence of osteoporotic fracture undergoing to dead bone; mini open anterior support and/or decompression or endoscopic decompression and instrumentation is necessary.
When pain has no purpose: understanding neuropathic pain

Les Kiemele, MPAS, PA-C
Assistant to Physician
Instructor of Medicine, College of Medicine, Mayo Clinic

Background and aims:

Pain is often referred to as the fifth vital sign and is used to monitor a patient’s health status. Neuropathic pain, also known as nerve pain, is a complex type of chronic pain that occurs when nerves in the central nervous system become injured or damaged. Damaged nerve fibers send incorrect signals to other pain centers in the brain, resulting in a change in nerve function at the site of injury and around the injury. This pain can be constant or intermittent, and is often described as burning, shooting, stabbing, tingling, or electric shock. This can be provoked by something simple as the slight touch from bed sheets or clothing, exposure to heat, cold air or wind. Nerve pain can significantly interfere with a person's quality of life when it is not properly managed. Treatment is complex and often unsatisfactory, particularly if started too late. Neuropathic pain often responds poorly to standard pain treatments and may worsen over time, leading to
serious disability. Treatment includes medications, physical therapy, sympathetic blockade and psychological treatment. Few controlled trials have been done to prove the effectiveness of these therapies. Common causes of neuropathic pain and treatment options will be discussed.

**Methods:**

Medical literature search on neuropathic pain.

**Results:**

Nerve pain can significantly interfere with a person's quality of life when it is not properly managed. People with nerve pain may find it difficult to sleep at night, be unable to work, have trouble concentrating, become isolated, lose interest in usual activities and become depressed because they don’t get any relief.

**Conclusion:**

Few things in medicine are more important than relieving pain and suffering. Doing this while maintaining patient safety is not easy. Several principles of pain management are useful in everyday practice. Pain is what the patient says it is, and it is important to recognize and treat the exacerbating factors leading to the pain. Treatment is complex and often inadequate, particularly if it is started too late.
References:


The mechanisms of the relationship between chronic pain catastrophization and symptoms of post-traumatic stress disorder

Skerdi Zahaj, Dajana Bejko

University of Tirana, Albania

Post-traumatic stress disorder (PTSD) and chronic pain are regularly observed in medical settings. Psychological models have shown that post-traumatic stress disorder can contribute to “catastrophize” the intensity of chronic pain. The frequent comorbidity and the concurrence of PTSD and chronic pain suggest a common vulnerability path, as well as the possibility for mutual maintenance. In this study we explain the mechanism by which these disorders are maintained and assess the role of post-traumatic stress disorder as predictors of chronic pain catastrophization. We recruited a sample of 100 patients suffering from chronic pain in “Mother Teresa” Hospital. The subject reported the catastrophization of pain and PTSD using self-reported scale. The measures used in the study were the Pain Catastrophizing Scale and Impact of Event Scale. A regression analysis was conducted and the model explained 57% of the variance with thinking avoidance and emotional intrusions significantly contributing. Results recommend that medicals should consider the role of PTSD as a factor for explaining catastrophization in chronic pain patients.
Ozone therapy for pain management

A. Irban, M.D., D.E.S.A

Pain Specialist, Assoc. Prof. at Anesthesiology and Reanimation, Diplomate of European Society of Anesthesiology, Acibadem University, Istanbul, Turkey

Background and aims:

Ozone is a chemical compound, consisting of 3 oxygen atoms. At room temperature, it is colorless, but has a bad odor. It is an unstable compound, immediately it forms O2. Joseph Lloyd Martin discovered medical ozone in 1850. In an ozone generator, an oxygen molecule divided into two oxygen atoms while passing through in an electric field to temporarily recombine in groups of three. It is an unstable compound, immediately it forms O2. So, it cannot be stored; has to be prepared just before to be used.

Methods:

In human body, at physiological pH (≤7.4); ozone application resulted in peroxidation related lipid degradation esp. in obese and patient with atherosclerosis. At alkalosis (pH≥8); after ozone injection, number of OH- is increased, it interacts with cellular membrane’s phospholipid, hydrogen peroxide enters into cell and effects
intracellular metabolism. In erythrocytes, ATP and 2,3 DPG increase and in immune-competent cells, NF-KB and cytokine are released. Many biologic effects have been attributed to ozone like increased glycolysis, effects on red blood cells, effects on rheology, bactericidal, fungicide, and virustatic, immuno-modulating action, analgesic and anti-inflammatory effects.

Glucose-6-phosphate dehydrogenase deficiency (Favism) is an absolute contraindication, because erythrocytes cannot balance oxidant/antioxidant effect. Serious arterial hypertension and hyperthyroidism are relative contraindications.

**Results:**

Application of low dose ozone inhibits prostaglandin synthesis, release of bradykinin and algogenic substances, and proteinase secretion from macrophages PMN leukocytes.

Ozone therapy is esp. useful in case of ischemic pain, back pain, arthralgia/arthritis and fibromyalgia.

In ischemic pain, decrease in blood flow leads to decrease in the formation of ATP. Development of local acidosis results in the loss of the normal ATP-Na/K pump. The release of chemical substances stimulates chemosensitive and mechanic receptors innervated by unmyelinated nerve cells found around the vessel. In this case ozone can be applied via major autohemoetherapy (MAHT) and transdermal application with bagging. Hemostatic changes induced by ozone
therapy leads to hypocoagulatory changes, leading to increase in blood flow and oxygen delivery to organs & extremities. Ischemic pain is relieved.

In back pain, both mechanical compression and biochemical mediators lead to pain. Intradiscal ozone injection increases proteoglycan degeneration in degenerative disc with changing intra- and intermolecular ionic bonds. These change lead to breakdown of 3-D structures and disc dehydration. Decrease in neuronal decompression improves neuronal metabolism. Also, ozone inhibits inflammation, corrects of ischemia and venous stasis and stimulates anti-nociceptor analgesic mechanisms. In back pain, also intramuscular ozone injection to the paravertebral muscles, trigger or acupuncture points is helpful.

Fibromyalgia is extended chronic disease; its treatment is still a real challenge for pain specialist. Although, etiopathogenesis of fibromyalgia is not known; due to the disorders at Non-RAM period of sleeping and changes at the level of serotonin, substance P, Growth hormone and cortisol; autonomic and neuroendocrine system irregularities and central hyper-excitabilities were emphasized. Nowadays, ozone therapy is also taken part in fibromyalgia treatment with different types of application technique such as trigger point injection, MAHT, transdermal ozone therapy. Combination of MATH with transdermal ozone therapy is an effective treatment method in relieving of fibromyalgia besides improvement at the
general well-being of the patients.

**Conclusion:**

As a conclusion, ozone therapy for pain management is cheap, easy, effective and safe technique in experienced hands.

**References:**

1. R. Viebahn. The use of ozone in medicine. 2007
2. CF Anderula et al. Minimally invasive ozone oxygen therapy for lumbar disc herniation. 2003
Expression and assessment of the fifth vital sign in newborn babies

S. Janchevska¹, A. Schischo².

1. University Clinics of Gynecology and Obstetrics, Department of Neonatology, Skopje, Republic of Macedonia,

2. Public General Hospital, Department of Neonatology, Gostivar, Republic of Macedonia

Background and aims:

The pain is “an unpleasant sensory and emotional experience which we primarily associate with tissue damage or describe in terms of such damage or both”. Pain processes are complex and represent the interplay of a number of underlying mechanisms, especially neonatal pain. The approach to pain management is unique for each individual and newborn infant too.

Goal of the study is to recognize a neonatal pain expression and measurement of the intensity of a neonate’s response to pain, induced by the routine medical intervention as venous puncture in the start of the baby’s life in the neonatal intensive care unit (NICU).

Methods:

This study includes 64 late preterm and full-term newborn babies,
from 35th to 40th gestational week, delivered in the University Clinics of Gynecology and Obstetrics in Skopje and Public General Hospital in Gostivar during the period of one year. Neonate infants were with Apgar score in the 1’ and 5’ more than 5. All studied babies were separated from mothers. We use Lawrence’s Neonatal Infant Pain Scale (NIPS) with six behavioral indicators in response to painful procedure in newborns in two times: during the procedure, and after the procedure. The calculated score measures the infants’ response to pain. Scoring ranges from 0 to 1 in each category, with the exception of cry, which ranges from 0 to 2. A total score can range from 0 to 7.

Results:

For late preterm neonate infants studied it took, to reach a score of 6 during the procedure and a 3 after the procedure. Examinees of second subgroup or full term babies collected a score of 5 during the intervention and a 2 after that. All newborn babies were with out of used the same drugs or non pharmaceutical things. There is no significant difference between behavioral responses in late preterm newborns and mature babies according to genders.

Conclusion:

Each routine procedure, such as a venous puncture or intravenous line placement, causes some degree of pain. The newborn baby’s behavioral responses are presented by facial expression, body
movement, and crying. A NIPS is one way to assess. Actually, the assessing of patient pain includes past medical history, a physical examination, assessing of psychosocial, family and cultural aspects, adapted for pair mother-newborn baby. A neonatal pain assessment could include pain history and previous treatment that has or has not helped the patient’s pain.

Pain in newborns is often unidentified because of their inability to communicate, or is unappreciated or misunderstood. We must respect neonatal pain.

References:


Overview of Physiology, Assessment, and Treatment. An AMA Continuing Medical Education Program for Primary Physicians.

Intravenous Paracetamol role on post operative (post op) pain.


Background and objectives:

Oral acetaminophen is one of the most widely used agents for acute pain relief, but historically, poor solubility and stability of this agent in aqueous solution prevented its use in an intravenous form. Stable formulations of intravenous acetaminophen (ie, propacetamol, paracetamol) have been developed and are commercially available (eg, Ofirmev®). Propacetamol is a prodrug that is hydrolyzed by plasma esterases to paracetamol within minutes of administration. The disadvantages of propacetamol are that it requires reconstitution, and may cause contact dermatitis and pain at the site of injection. In contrast, paracetamol is a ready-to-use solution without these adverse reactions. Paracetamol acts at both central and peripheral points of the pain pathway, including stimulation of nitric oxide by direct inhibition of n-methyl-D-aspartate (NMDA) receptors and inhibition of the cyclo-oxygenase 2 pathway. In adults, paracetamol is administered as a 1 g/100 mL intravenous infusion over 15 minutes with a maximum dose of 4 g daily. Paracetamol is metabolized in the liver and excreted in the urine, and caution is advised when using this
agent in patients with hepatic or renal insufficiency. Overdose can occur and is treated with acetylcysteine.

The purpose of this study is: To explore the role of Intravenous (IV) Paracetamol beside other opioid on postoperative acute pain.

Methods:

In This study are included 60 patient(pt) that had undergone surgery on urology, with renal calculi. Endo-tracheal anesthesia was used. This is a prospective Study. In this study are included pt between ages of 18 and 65 years old. Endo-tracheal anesthesia was standard, for induction was used fentanyl, tiopental miorelaxine, and to continue and maintain anesthetize was used pavulon, oxygen and suvofluran. To evaluate pain was used the vas scale with pain score from 1-10. Pt are divided randomly on two groups, one group has receives beside morphine, 1gr of paracetamol every 8h. The other group instead of IV paracetamol received 100ml of saline 0.9% solution(without pts and the data collecting physician knowledge).

Results:

Was found that the group that received IV paracetamol on the first 24hs post op consumed only 20mg of morphine, compared with the group that did not receive paracetamol that consumed 35mg of morphine on first 24h post op. The pain score was maintained on both groups at 4-5 VAS. On the second day postoperatively the group that
did receive paracetamol consumed 10mg of morphine while the group that did not receive paracetamol consumed 25mg of morphine to maintain the same pain level. And on the third day the group that received paracetamol did not consume morphine at all to maintain pain level between 3-4 and 2-3 VAS. while the group that did not receive paracetamol consumed 10mg of morphine to maintain the same pain level as previous group.

<table>
<thead>
<tr>
<th>Morphine consumption</th>
<th>Group I Received paracetamol</th>
<th>Group II Controle group</th>
</tr>
</thead>
<tbody>
<tr>
<td>First date</td>
<td>20 mg</td>
<td>35 mg</td>
</tr>
<tr>
<td>Secound date</td>
<td>10 mg</td>
<td>25 mg</td>
</tr>
<tr>
<td>Third date</td>
<td>0 mg</td>
<td>10 mg</td>
</tr>
</tbody>
</table>

**Conclusion:**

Intravenous Paracetamol use on urology pt postoperative significantly decreases morphine consumption (including all side effect of morphine) while resulting on very good pain control

**References:**

1. Sinatra RS, Jahr JS, Reynolds LW, Viscusi ER, Groudine SB, Payen-Champenois C. Efficacy and safety of single and repeated administration of 1 gram intravenous acetaminophen injection (paracetamol) for pain management after major orthopedic surgery.


6. OFIRMEV® (acetaminophen) injection prescribing information. Cadence Pharmaceuticals, Inc.


Introduction:

Caudal epidural anesthesia is one of the most commonly used regional techniques in pediatric patients. This technique is a useful adjunct during general anesthesia and for providing postoperative analgesia after infraumbilical operations. The quality and level of the caudal blockade is dependent on the dose, volume and concentration of the injected drug.

The objective of this study was to evaluate intraoperative analgesic effect and duration of postoperative analgesic effect of caudal block.

Methods and materials:

In this study there were included 100 patients, ASA I, II, body weight 10-30 kg, scheduled for various infraumbilical surgery (hypospadias, inguinal hernia, retention testis, megaureter, atresio ani et recti, etc).
After premedication with Midazolam 0.3mg/kg/ and sedation with inhalation anesthetic- sevoflurane, general anesthetic induction was given with intravenous agents (thiopental, propofol, fentanyl), the airway was controlled by mask ventilatin, laryngeal mask- LMA and endotracheal tube – ETT, and maintained with O2, N2O and sevoflurane.

The patient is placed in the left lateral decubitus position, caudal anesthesia was performed after local cleaning using needles of appropriate size under sterile conditions.

The patient were allocated in three groups: group A (n-25 patients or 25%), caudal block was realized with 0.5 ml/kg Bupivacaine 0.25%; group B (n-25 patients or 25%), caudal block was realized with 0.8 ml/kg Bupivacaine 0.25%; and group C (n-50 patients or 50%), caudal block was realized with 1.0 ml/kg Bupivacaine 0.25%.

Postoperative analgesic efficacy was assessed using a visual analog scale – VAS from 1-10, in first 2, 4, 6, 8, 10, 12 and 24 hours from the end of surgery.

**Results:**

All patients were judged to have sufficient intraoperative analgesia, and none of them received additional analgesics intraoperatively.

At group A patients, duration of postoperative analgesic efficacy of caudal block was until 6h after surgery; at group B patients until 8h;
and at group C patients, duration of postoperative analgesic efficacy of caudal block was until 12h after surgery.

No complication was encountered after caudal blocks.

**Conclusion:**

Caudal epidural anesthesia is an easy, simple and safe anesthetic technique, for intra and postoperative analgesia in children undergoing subumbilical surgery procedure.

**Key words:** Pain; postoperative: Anesthetic technique; regional anesthesia- caudal block: Anesthetic; Bupivacaine 0.25%
Advantages of combined spinal and general anesthesia in analgesia using intrathecal sufentanil in colorectal surgery.


**Background and aims:**

Subarachnoid anesthesia combined with general anesthesia has become popular for colorectal cancer surgery nowadays. Benefits belong to that are: short time from injection to surgical anesthesia, cost, reducing of intraoperative bleeding, postoperative analgesic consumption, complications, activated patients, and decreased mortality and morbidity in geriatric ages. The using of intrathecal Sufentanil (a lipophilic opioid) added to Bupivacaine in combined spinal& general anesthesia(CSGA), improve intraoperative and postoperative analgesia versus general anesthesia(GA) .The aim of our prospective study was to compare the efficacy and safety of intrathecal Sufentanil in CSGA for colorectal cancer surgery.

**Methods:**

A total of 80 patients ASA I-III, ages 65-80 years, were randomly assigned to two groups (40 in each). The group I received CSGA with intrathecal Sufentanil(5μg) ,Bupivacaine (7.5 mg)& GA  and group II
received only GA. Written, informed consent was obtained from all patients. In the first 24 hours & postoperative period, pain intensity, necessity for a complementary analgesia, side effects and final subjective effect of analgesia were recorded. Data are presented as means values in% and standard deviation. Multiple tail t-test analysis was performed and p ≤0.05 was considered significant.

**Results:**

All patients have no significant difference in age, weight, height and duration of surgery. Duration of analgesia in CSGA was 11.5 h. GA needed application of parenteral analgesics every 2-3 hours. Final subjective effect of analgesia, according to verbal descriptive scale of pain was satisfying with 38% in CSGA versus 12% in GA. The mean duration of pain free period was statistically 235± 96 min in CSGA v.s 122± 84 min in GA. Side effects, hypertension & nausea vomiting seen in 16% in CSGA v.s 12% in GA.

**Conclusion:**

This study demonstrates a reduced postoperative analgesic demand and comparable quality of analgesia in patients with intrathecal Sufentanil used in CSGA in comparison to patients with GA. The mean duration of pain free period was statistically highly significant in favor of CSGA.
Headache as a result of dural puncture after spinal anesthesia

Prof. Dr. Nehat Baftiu, Dr. D. Baftiu, Dr. A. Dervishi, Dr. D. Bunjaku, Dr. J. Baftiu
Department of Anaesthesiology & Critical Care, The University Clinical Center, Prishtina, Kosovo

Introduction

In a dural puncture a needle is passed through the dura mater into the cerebrospinal fluid within the spinal canal.

Dural puncture is a commonly performed invasive procedure for various indications like diagnostic lumbar puncture, spinal anaesthesia, myelography and intrathecal chemotherapy.

However, unintentional dural puncture can also occur while performing epidural anaesthesia or analgesia for various indications, including postoperative and labour pain relief.

Post dural puncture headache (PDPH) is defined as "a headache occurring after dural puncture and has a significant effect on the patients post operative well being i.e. headache which is not only postural but also continues for more than 24 hours at any level of intensity or so severe at any time that the patient is unable to maintain
upright position.

When headache appears in the postoperative or postpartum period after regional anaesthesia it can be due to many reasons, rather as a complication of dural puncture during regional anaesthesia. However the most common cause of an anaesthesia induced headache is PDPH.

This review attempts to address several clinical pertinent questions surrounding this topic. Careful review of literature suggests that PDPH has many other reasons besides dural puncture, but there is a definite relationship between a dural puncture and PDPH, a fact which can not be ignored.
Pain treatment in general, anginosa pain, hipertension at patients with chronic kidney insufficiency at the terminal stage with patients on hemodialysis programs.

N. Uzairi1, F. Omeri2

1. Internal diseases ward at the Clinical Hospital, Tetovo, R. of Macedonia

2. Hospital haemodialysis unit. at the Clinical Hospital, Tetovo, R. of Macedonia

**Background and aims:**

The process of haemodialysis and its advanced and sophisticated forms save people’s lives with chronic renal insufficiency in terminal stage (End stage renal disease). It is known to science as the direct connectivity of cardiovascular disease, hypertension, syndrome angina and forms with kidney diseases.

Chronic renal insufficiency is a clinical syndrome during which occurs progressive lesion of nephrones that lead to renal insufficiency and its functions. Among etiologic agent factors, other than nephropathies diabetes, hypertension and glomerulonephrits, we have bacterial infections, uropatite, specific diseases, tuberculosis and those rare verminousis that occur in non-developed countries. Among the rare diseases that cause chronic renal are: uremic haemolytic
syndrome, medicamentosis nephropathia, nephritis interstitial, systemic diseases, kidney disease polycystic and others.

The treatment of chronic renal insufficiencies in the early stage deals with the initial illness treatment. Among the measures mentioned is the reduction of dietary protein, abandoning physical work when we have the azotemy stage developed, whereas in advanced stages of disease are obtained high-quality protein that have to do with what is called, “quality of living” of the patient. In the clinical stage of disease glomerul function is less than 25% with consequences for the cardiovascular system and other systems, whereas in the last stage where glomerular filtration is below 5ml/min no doubt it is when haemodialysis process begins. The aim of the paper is to document at our patients’ alliterations of blood pressure, and hypotensis and hypertensis crises during the dialysis session, the general appearance of pain in these patients, the anginas pain and coronary syndromes and possible cardiovascular collapse and the measures taken to treat them.

**Methods and materials:**

There were 40 patients of different ages analyzed, from whom 21 (52.5%) males ranking from 1985-1938 and avg. age 54.2 years and 19 (47.5%) women: avg. age: 62.5 born between 1985-1927. All the patients have undergone the process of division at the haemodialysis in the ward of haemodialysis in Tetovo with GAMBRO 90 type apparatus with bi carbonate dialysis and Nipro dialyser -150 BC DL
and poliflux membrane. Particles dissolved in the blood through the membrane defund through semiconductor membrane according to the concentration gradient. Duration of dialysis was from 2-3 and 12 years. Weekly sessions were 3x3, 30 min.

Analysis has been made on urea, creatinin, ac. Uricum, phosphate alkaline. Electrolytes, blood picture, sFe, total proteins, lipids, PTH, CRP, HBs Ag and HCV. It is calculated factor Kt / V and Urea Ratio (URR). Brice is taken from the throat and nose, chest radiography, abdominal Echo, ECG and Echocardiograph to evaluate left ventricular function. Blood pressure was measured before dialysis and during end of the dialysis session with sfigmanometer of mercury from the doctor himself. These patients were followed from 01.07. 2011-31.06. / 2012. AV fistula was advanced in the left lere as well as alternative routes v. subclavia and femoral catheter. Each patient was given Heparines dose for each session. And doses of erythropoietin, Venofer and Rocaltrol were weekly in protocol.

**Results:**

According to the results obtained: 27.5% were diabetic patients with hypertension in 190/200--170/90 value, 180/120 were (20%) of subjects with blood pressure values 155/100, 140/90, 135 / 75 mmHg 1shin 21 (52.5%) subjects, with, voltage target dose 125/75 mmHg were five (12.5%) subjects, and hypotension were six (15%) of subjects.
Conclusion:

With progress of chronic renal insufficiencies toward terminal stages we come to multiple disorders because of uremic syndrome, hypertension, hypocalcaemia, increased synthesis of parathormonia, acidize metabolic and renal osteodistrophia which is expressed as osteomalatia, osteitis Cystic fibrosis, osteosclerosis pathological fractures and other. From here we come to the explanation about the nature of pain in patients on dialysis, where the following types of medicines are used: Paracetamol, ketoprofen, tramadol, and mixtures of Paracetamol dheTramadol (Doreta). Antireumatic types of iosteroids (Diklofenak) were used less due to erosive action on the stomach, but were effective in light pain and moderately in hard pains!

Disorders of electrolytes, retention of Na and Hipercalemia give first signs in ECG and as a result we had arrhythmia. Anorexia and weight loss, ulcers gastroduodenal and gastrulae bleeding, neuromuscular disorders and muscle cramps, reduced glucose tolerance, immune disorders, arterial hypertension was voluminous and vazoconstrictive due to retention of Na and water. The given therapy was Nifedipin Ca-antagonists, receptor blockers beta adrenergic. Any pain on anginosa at patients with haemodialysis was treated in coronary unit in the same way as with other patients with Ling sublingual nitroglycerine with 0.3 to 0.6 mg rapid effect and this dose is repeated several times for several minutes. Same effect is at Nifedipines and
Isosorbids 10 mg in sublingual way. 15 mg Nitroglicerol is given in a transdermal way in the form of disks. ASA is given in 80-300mg dose. Heparin was given in standard doses, but avoiding any previous bleeding. These doses in these patients with haemodialysis are titrated better and are reduce according to the weight and other parameters. As final, I want to pay respect for authors who work this way, we believe that preserving the target aims of arterial pressure 125/75 mmHg at patients with chronic renal disease in the terminal stage and haemodialysis program is questionable because any attempt to reduce the excess voltage these entities can cause cardiovascular collapse and hipotensive crisis, A_V fistule blasts and other complications

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Postoperative analgesia at children after general anesthesia with ketamine

Adem J. Bytyqi MD, Fadil Kryeziu, MD, Afrim Avdaj, Mr.Sci, MD, Agron L. Bytyqi, BSN, MA, ToN, Bashkim F. Sylaj, RN, MSC cand.

Aim of Investigation:

Ketamine is a separate drug for achieving general anesthesia, analgesia and amnesia. Postoperative analgesia still remains a major problem especially at children. We have made comparisons postoperative pain between anesthesia with Ketamine and Sevoflurane.

Methods:

In a double blind prospective and randomized study to a children group of 146 pre-medicated patients, aged 1-8 years, which underwent hernia repair in the children surgery. Patients which underwent surgical intervention with general anesthesia with Ketamine (K, n=74) and anesthesia with Sevoflurane (S n=72). At anesthesia with Ketamine, the anesthesia was held only with Ketamine while was ordinate to the bolus dose 1mg/kg of body weight, intravenous ketamine every 5-9 minutes. Anesthesia with Sevoflurane was held with 1.5-2% and Fentanyl 5 µg/ kg¹ which were administered during surgery. At all postoperative children were
administered rectal paracetamol 40mg/kg of body weight. In the recovery room monitored: pulse, SPO2 with pulse-oximeter, breathing and pain, all these parameters were recorded in the monitoring list. Also there is recorded the time of came from recovery room and time of issue from recovery room. Pain was monitored by Faces Pain Scale/FPS (scaling up to 5 = no pain, 5 = extreme pain).

Results:

There were no significant differences between the 2 study groups regarding age, sex, weight, than patients with ASA physical status (ASA I and ASA II).

Patients of group S had a significantly higher percentage of postoperative pain compared with group K (27.3% vs. 4.2% respectively P<0.05). Number of facial grading in group K 1.2±0.6 in comparison with corresponding group S 3.4±0.7 (P<0.05). Healing time of patients in group K was shorter than in the corresponding group S (11.1±2.3 vs. 16.5 ± 5.4 minutes, respectively P<0.01).

Conclusions:

In children, such as keeping management of anesthesia with Ketamine is associated with an incidence much lower of postoperative pain than in anesthesia with Sevoflurane.
Reference:

Carson, I.W.:

Postoperative pain management in regional hospital of prizren

Ma. Agron BYTYQI, Prof. Dr. Naser RAMADANI, Dr. Sylejman NISHORI

Introduction:

Pain is usually a very unpleasant experience. Postoperative pain is a complex phenomenon that includes physical, psychological, social, cultural and environmental factors that interrelate and affect how pain is perceived, managed and evaluated. After surgery, pain is a common experience for patients in the surgical ward because of tissue trauma. It is unethical to allow patients to suffer from pain without trying appropriately to ensure a high quality treatment. Health professional always should believe in assessing the patient for his pain.

Aim:

This study aims were to identify and explore the degree of concordance between patient and nurse perceptions about postoperative pain management and approach used; Assessment of nurses and patients perceptions regarding postoperative pain management; Recognition and analysis of nurses interventions for management of postoperative pain; A comparison of the results of nurses' perception and patients' perception related with postoperative pain management; Creating opportunities for improving health
education and continuing nursing care to patients with pain; To investigate routine work, describe the level of knowledge and improve old ways of working for a better quality care to patients with pain.

**Material nad methods:**

The research method was quantitative, statistical analysis was made of data from the assessments, opinions and attitudes of participants and their generation of numerical values provided by the questionnaires. Target groups were nurses (n = 30) and postoperative patients (n = 50) of the surgical wards at the Regional Hospital of Prizren.

**Results and Discussion:**

The findings reported in this study concerning discrepancies in ratings of post-operative pain between patients and nurses and inconsistent use of interventions in controlling post-operative pain clearly indicate that nurses underestimate both the frequency and the intensity of patients' post-operative pain experience. These findings are consistent with studies from the literature review.4. Regarding the recommendations for the treatment of pain without drugs and pre-operative preparation, all participated patients had responded negatively. Lack of preparation pre-surgically for patients on how to manage their pain, the failure to administer analgesia promptly on the first post-operative day and the significant failures to detect patients
in pain, all suggest a low priority is being giving to postoperative pain control.

**Recommendations:**

To improve the quality of nursing services related to postoperative pain management based on indications of the results of this study, I recommend:

To undertake continuing professional educations for nursing personnel, including postoperative pain management with important specifics of the assessment, treatment and documentation.

To make functional the use of nursing care plan for each patient with an administrative directive from the Ministry of Health,

To develop guidelines and protocols for the care of pain on postoperative patients, including pre-operative information for patients,

To introduce systematic assessment of patients’ pain post-operatively, this can be facilitated by a change in the duties of nursing models based on patient (e.g. pain control list).

To develop and implement the educational programs within the stationary health institutions with emphasis on effective postoperative pain management.

**Keywords:** Pain, Ratings, Nurse, Patient.
Literature:


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Undertreatment of pain is a widespread problem that cuts across all phases of patient care. The effective management of pain is a crucial component of good perioperative care and recovery from surgery. Although the acute postoperative pain service plays an integral role in pain management of the surgical patients, there are considerable barriers that challenge the establishment and/or effectiveness of acute pain teams in managing patients across continuum of care. There is evidence that the overall incidence of moderate-to-severe pain in surgical patients is about 25-40% despite availability of pain treatment. A major obstacle to the establishment of postoperative pain services is its cost in a privatized health system besides deficiency of capable professionals related to the postoperative care.

The perioperative pain management service provides direct patient care such as the management of continuous epidural and regional
catheter infusions and other modalities, also play a leading role in patient education and the education of other physicians, nurses and caregivers to ensure their competence in effectively assessing, managing and meeting patient’s needs.

The key component to establishing a successful perioperative pain management service begins with an institutional commitment to support the service. The team must be built around a physician leader with training and experience in pain medicine. There must be other anesthesiologist to support the service. A nurse coordinator or an anesthesia technician and support from the pharmacist is also necessary. The leader is responsible for the development and implementation of clinical pathways and protocols that are effective across the continuum.

The acute pain service monitors the efficiency of postoperative management, visits regularly the patient in order to assess the pain. The team members follow the medication need of the patient and manages the side effects of the pain therapy, and keeps regular records of all the procedures and assessments.

In our hospital, we had established our acute pain service at June, 2011. We wanted to share our experiences and data since that time.

We had followed 2565 patients between June 2011 and June 2012. Six hundred seventy one of the patients (26%) had epidural anesthesia and postoperative analgesia. One thousand eight hundred ninty four of
them (73%) had undergone general anesthesia. The pain of the patients were assessed by visual analogue scale (VAS), the localization of the pain, the medications and their dosage, the complications and their management were followed and recorded. The mobilization of the patient, motor blockade with Bromage score in patients with epidurals and the satisfaction of the patient were also followed and recorded. The complications noted for the patients who had epidurals were; pruritus (86 patients-12%), nausea (40 patients-5%), hypotension (12 patients-1%), vomiting (6 patients-0.8%), headache (6 patients-0.8%), dizziness (6 patients-0.8%), subcutaneous infusion (3 patients-0.4%), misplacement of the infusion (2 patients-0.2%). The complications recorded for the patients who had general anesthesia were; nausea (108 patients-5%), vomiting (58 patients-3%), sleepiness (30 patients-1.5%), pruritus (24 patients-1.2%), hypotension (18 patients-0.9%), dizziness (6 patients-0.3%), apnea (3 patients-0.1%), unconsciousness (3 patients-0.1%). There were no hemotoma, infection, temporary neurological symptoms, subdural/spinal infusions noted.

We concluded that education for all the institutions is mandatory in order to establish a proper acute pain service and more meticulous visits and following the patients will increase the service quality.

In developing a perioperative pain management service it is important to bear in mind that the importance of effective perioperative pain management extends well beyond the mere establishment of
dedicated personnel but must also encompass a leadership role in transforming the institutional culture to elevate relief of pain and suffering to its place as a primary goal of patient care.
Treatment of emergency cases with abdominal pain in Regional Hospital of Prizren
(In the period 25.05.2009 to 23.06.2010)

Dr. Afrim Avdaj, Dr. Adem Bytyqi, Ma. Agron Bytyqi, Shpejtim Rrahmani

Introduce
Acute abdomen includes acute diseases associated with sensitivity to pain and signs of inflammatory reaction or viscera dysfunction. Many diseases, some of which do not require surgical treatment may produce abdominal pain, so that the evaluation of patients with abdominal pain should be methodical and cautious, which means the evaluation of the patient's history, physical findings, laboratory data and imagery tests. [1].

The overall goal of the research is:
Method of surgical treatment of acute surgical diseases with abdominal pain during the period of one year from date: 25/05/2009 till: 23/06/2010 at Regional Hospital Prim.dr. Daut Mustafa in Prizren.

The purpose of this paper is to present our surgical experience with a series of patients diagnosed and treated surgically in emergency, along with a review of recent literature.
In particular, it will analyze cases worked from acute surgical diseases treated in emergency involvement cases by: age, gender, residence, intraoperative diagnosis, type of operation, type of incision and type of anesthesia.

**Methodology**

Data collection was done by collecting material from statistical documentation of the Surgery Department, Regional Hospital “Prim.Dr. Daut Mustafa” in Prizren.

Was analyzed one year period, all received cases in emergency were with abdominal pain which were operated, was analyzed intraoperative diagnose, method of treatment, the type of incision, surgical techniques.

**Results**

From 2000 patients who were operated during the study period (25-05-2009 to 23-06-2010) in emergency total of 606 cases was operated or 30.3%. By age groups: 1-17 years 217 cases or 35.8%, age group of 18-25 were 173 cases or 28.5%, age 26-50 with 166 cases or 27.3%, age 51-65 years 28 cases or 4.6% and age over 65 years were 22 cases or 3.6%.

With dg of Acute Appendicitis were treated in total 516 cases or about 85% of the number of urgently operated. During this period we have 8 cases operated from hernia incarcerate, belonging to both
sexes 4 cases females and 4 cases males. Intestine ileus 17 cases, of which: 11 females, 6 males. Colon ileus 6 cases: 1 female, 5 males. Operation according to Hartman were treated 4 cases, while 2 with anastomosis. Perforated gastro duodenal ulcer was 12 cases: all males. Hemopneumothorax 17 cases: 3 cases females and 14 males. Vulnuspunctumabdominis 11 cases: female 2 cases and 9 cases males. 3 cases was treated with hepar (liver) sutures, splenectomy 2 cases, 2 cases with omentum suture, 3 cases with mesenter suture and intestine suture 1 case. Mesenteries thrombosis of intestine 3 cases: 1 case female and 2 case male. Volvulus sigma 3 cases: 1 case female and 2 case male. All cases were treated with resection. Dehiscentiovulneris 4 cases: 1 case female and 3 case male. Vulnussclopetariumabdominis 2 cases males. One case was treated with diagnose acute pancreatitis, 4 cases with hematoperitoneum, all of them females. With VLC capitis were treated 2 cases.

**Discussions**

Surgical treatment of acute cases with abdominal pain remains the most common way (the only) such emergency treatment. But even though have passed centuries of research studies, many aspects of surgery are not well defined and remain controversial.

Given that a significant number of treated cases with abdominal pain at emergency have been cases which if they will diagnose in time could be avoided urgent surgical intervention, which raises awareness of the population need to be reported at time to the doctor and the
advancing of primary health care framework and diagnostic center.

From our survey datas how sthat the number of patients treated with perforated appendicitis was about 20% of the total number of appendectomy, which expresses the necessity for a proper framework in any abdominal pain before to order analgesics prior consultation of the surgeon in order to avoid possible complications. According to a British study in the audit of 1190 emergency admissions with abdominal pain, 1166 patients were examined in the general surgical unit; the diagnosis was non-specific abdominal pain. In 415 cases, 35% acute appendicitis, in 200 cases 17% of bowel obstruction. The largest number of admissions occurred in the age group of 10-29 years with 31% and 60-79 years by 29%. Surgical operations were performed in 551 patients (47%) and there was a 16% incidence unnecessary appendectomy 22% of the age group 20-29 years. [6].

Literature:

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Effect of postoperative analgesia on nutritional support of surgical patients

V. Shpata1, A. Çela1, A. Soxhuku2, I. Ohri3

1 Nursing Faculty, University of Tirana
2 SUOGJ “Koço Gliozheni”, Tirana
3 University Hospital Centre ‘Mother Teresa’, Tirana, Department of anesthesia and intensive care, Faculty of Medicine, University of Tirana

Background and aims:

It has been assumed that sufficient pain relief will improve the surgical outcome with reduced morbidity, need for hospitalization and convalescence, and there is a common consensus that optimal (dynamic) pain relief is a prerequisite for early postoperative recovery.

Methods:

Postoperative paralytic ileus (PI) may last for days and prolong hospitalization and convalescence.

Results:

Non-steroidal anti-inflammatory agents may reduce the incidence of opioid-related side-effects (respiratory depression, sedation, nausea and vomiting, ileus, urinary bladder dysfunction and possibly sleep disturbances).
Postoperative paralytic ileus (PI) may last for days and prolong hospitalization and convalescence. The main pathogenic factor of PI is activation of inhibitory splanchnic reflexes, which are subject to modification by thoracic epidural local anaesthetics. Postoperative continuous thoracic epidural local anaesthetic techniques significantly reduce PI and the need for opiate analgesia after surgery. This effect may have major clinical implications, as it may allow early enteral nutrition, which has been demonstrated to reduce postoperative morbidity. The inclusion of a low-dose opioid in the epidural local anesthetic regimen improves pain relief and may not significantly inhibit the ileus-reducing effect. In contrast, postoperative epidural analgesia with opioids alone has no positive effect on ileus.

Evidence is mounting that early postoperative enteral feeding may be advantageous for recovery.

**Conclusion:**

Good pain management is essential for rapid recovery from surgery. Postoperative analgesia focuses on multi-modal pain relief, aiming to minimize side effects of the different classes of drugs, particularly opioids. Continuous thoracic epidural local anesthetic infusion reduces the duration of PI, provides optimal pain relief with reduced opioid requirements, allowing early postoperative oral nutrition. Early oral feeding should be included as routine in perioperative care after major abdominal surgery, as it is safe and provides benefits for catabolism and infectious morbidity.
Treatment of pain in children following (adeno) tonsillectomy’s

F. Gjonbalaj

Clinic of Anaesthesia and Intensive Care unit UCC Pristina

Background and aims:

The purpose of this study was to assess the post-operative pain in children who underwent adenoidectomy’s or/and tonsillectomy’s. Subject of the study were parents of 121 children operated. Children operated were 70 boys and 51 girls whose average was 4.3 years old

Methods:

Assessment of pain is done by interviewing the parents of children operated by adenoid or/and tonsils. Assessment is made for the first day after surgery, and this assessment is done at the hospital, and the seventh post-operative day is done through telephone interviews with. Also parents were asked whether the child had no pain during swallowing, taking fluids, has been vomiting and sleep irregularities. Evaluation is done by VAS (Visual Analogue Scale)

Results:

Interviews on the first day after surgery provides data that 91% of operated children had different pain intensity. The children had to be
administered analgetics (paracetamol 30 mg/kg). At the hospital receiving analgetics to all children is made in regular intervals. In telephone interviews on the seventh day after surgery, pain intensity was greater in children operated by the tonsills, while those after adenoidectomies lower. 81% of parents believe that post-operative pain has been a serious problem, 97% have used paracetamol for the cessation of pain, only 25% have administered paracetamol in appropriate dose and regular intervals, 63% had experienced problems in feeding, 46% when taking liquids, 25% had vomiting and 70% of sleep disorders.

**Conclusion:**

From this study it was concluded that children have different pain intensity of it is particularly strong among those who underwent tonsillectomy. Management of pain should be done so much with quality in the health institution, the first day after surgery, especially the explanation must be given up clear, precise and accessible to parents for treatment at home.

**References:**


Abstract

Vlora city is near bay of Vlora and it represents the natural boundary between Adriatic and Ionian seas. The bay of Vlora represents one of the most attractive of the coastal zones of Albania and it has been defined as a top-priority tourism areas. From 1967-1992 a chloro-alcali plant using very outdated technology, lying to the 4 km to the north Vlora city discharged large amounts wastes containing mercury. Polluted sludge high mercury content, was deposited on an open damp near seashore and around plant’s industrial building. After plant’s closed many families are population thes area and are created an quarter with 180 families.

Several monitoring have been carried to evaluate the pains in the children 13-14 years old. Modes of exposure are dermal and inhalation. Symtoms are headache, chest pain and muscle pain.

Key words .mercury contamined, headache chest pain, muscle pain.
Pain caused anxiety in diabetic neuropathy suffering persons

A. Zeqja1, I. Alimehmeti1, A. Ylli1, S. Grabova2, E. Zoga3, J. Ajasllari4

1. Service of Endocrinology, UHC "Mother Theresa", Tirana, Albania
2. Service of Neurology, UHC "Mother Theresa", Tirana, Albania
3. Office of Public Relations, UHC "Mother Theresa", Tirana, Albania
4. Service of Pediatrics Nephrology, UHC "Mother Theresa", Tirana, Albania

Background and aims:

Diabetic neuropathy is the most frequent complication of diabetes mellitus and it is well known as one of the most important causes of morbidity.1 The International Association for the Study of Pain defines neuropathy as initiated or caused by a primary lesion or a disfunction of the nervous system.2 Neuropathic pain influences patient's daily activities, sleeping, ability to work, interpersonal relationships, and spiritual condition. Anxiety and fear caused by pain play an important role in the adaptation to alarm sensed by the organism as soon as it senses a hazard or damage. The chronic disfunction of the alarms transforms this response to a pathological condition.3
The first goal of the study is to identify the anxiety level in a series of persons with diabetes and diabetic neuropathy. The second goal is to determine the anxiety components that influence the most on neuropatic pain perception in this series.

**Methods:**

30 patients were involved in the study, 16 males (53,33%) and 14 females (46,67%), aged from 34 to 77 years old. Median age 56.73 years old. Average time from the beginning of diabetes 7.95 years. All patients had type 2 diabetes mellitus (T2DM).

Patients were asked to fullfill two questionnaires. The first one contained personal informations. The second questionnaire was “Pain Anxiety Symptoms Scale” (PASS-20), a self-reporting instrument of 20 items, developed to measure anxiety and fear symptoms as a response to pain. PASS-20 is the only instrument developed in order to measure four different pain components correlated to anxiety: a) cognitive component; b) fear component); c) avoidance component; d) physiologic component. PASS-20 has an answer format that ranges from never (0 points) to always (5 points).

**Results:**

First goal: PASS-20 average total score was 65.43 (standard deviation 20.6). Second goal: the highest score was achieved by the avoidance component, average score 4.27. Fear component had an average score of 3.39. Cognitive component had an average score of 3.08.
Physiologic component had an average score of 2.75.

**Conclusion:**

First goal: pain caused anxiety level in this population is high. Second goal: in this series the most influencing component in pain perception came out to be the avoidance component. These data help understanding that when a person starts to feel pain ceases every activity, trying to lower the intensity of pain before it really appears. High score was achieved in the fear component too, that comes out to be a key element of pain and of the way the person reacts to it.

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Pain in injuries with explosive materijales

Dr Sadri S. Hulaj, Dr Verore S. Hulaj - Krasniqi
Regional Hospital, Prim Dr Daut Mustafa, in Prizren, Emergency ward

Injury with explosive materijales present periodic patology but somtimes we luck and in sporadic kysis. Injury poeple with explosive materiales normally meet in the holiday - new years when poeple celebrite and injury or sicc poeple cheking medical help in the emergency departament. One part of injury poeple treate himself, other part chek medical help to nearest medical stuff ore doctors and more hard cases transfer in the Emergency departament.

Goals:

Is to present reality of injury, traetment in emergency and possibility risk for the cityzen during the celebrations of new years. This is and propositiones of autor for citisen and instituitiones for posibility preventiones in th high level .Ewery nonattentiones gest follow with herd complicationes for patient, familly and poeple in the generally .

Method:

We analise statistics thinks from book of Emergency ward in regional Prizren Hospital with retrospectiv method. We analise all the patient
who came in Emergency during the newu years last five years - from 2008 -2012 . Was analise some specifik thinks for patient who came last night and newu day during 5 years and account birthday, sex ,livingplace , localisationes of injury e tc.

**Conclusiones:**

We analise materi material from Prizren Hospital Emergency ward in period of 5 years during 2008 – 2012 . We finde totally nr of patient include with injury from explosive materiales who is 38. We conclude dont have e significant deference .In the 2008 was 3 injury, 2009 - 8 , 2010 – 10 , 2011 -9 and 2012 -8. In the sex more patient was Male 35 or 92 % and 3 Female or 8 % . Grup age of injury poeple was yang poeple and old member 30-39 years. Drugs that use for the degise pain was lokal anestetic and Diklofenak sodium. Pople from the willige was more than polple who live in the town . Localisationes in the body was upper arms – hand and finger but was and injuri in the haed an genitalia . Nr of hospitalisationes was 8 0r 21 % / 7 in Ortopedi ward and 1 in Surgery ward and one transfer in University center in Prishtina .

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Impact of headache on quality of life in patients with migraine

Abdullah Gruda, Nurse, UCCK - Clinic of Neurology, Pristina

Background and aims:

Migraine is a neurological disorder characterized by a cycle of headache attacks with moderate or very strong. Migraine as the most frequent form of experiencing pain in humans, significantly affects the quality of life. The concept of quality of life is defined as an indicator of physical, psychological, emotional and social function development of a person based on his subjective perception. Patients with migraine research aimed to evaluate the degree of disability from headache, quality of life and impact on quality of life headache.

Methods:

The study involved 57 patients were diagnosed with migraine. Instruments for data collection were used MIDAS questionnaire (the migraine disability assessment) and QVM questionnaire (evaluating the quality of life of migraine). The data were analyzed in Microsoft Office Excel 2007.

Results:

From 57 patients with migraine, 31 (54%) were female and 26 (46%) males. Mean age 39 ± 10. MIDAS score: average number of days
affected by headache 36.82, headache intensity of 8.14, with mild pain 7 (12.28%). Levels of disability: little or no disability 9 (15.79%), mild or infrequent disability 6 (10.53%), moderate disability 14 (24.56%), severe disability 28 (49.12%). QVM score: 71.28% global index, where the functional index represented 37.78%, 29.71 Index psychological, social index 23:33, medical index 9.18%.

**Conclusion:**

Patients reported high levels of fear of a migraine attack, duration of symptoms accompanying attacks, increased nerves, loss of energy and fatigue. Impact of headache on the degree of disability affects the quality of life in patients with migraine. Promotion of communication nurse - patient and evaluating the quality of life, can favorably impact on maintaining and improving quality of life. and in providing better health care for patients with migraine.
Stenosis of mitrale valve and its treatment

Gentiana Mehmeti

Faculty of medical sciences, Branch: Master of pharmaceutical sciences, Tetovë

Aim:

The aim of this paper is to analyze the mitral stenosis based on age groups, gender and complications.

Materials and methods:

In this paper analyzes the 8 sick with mitrale stenosis who are treated in the Regional Hospital in Gjilan Internistic Unit, the period of the year 2009-2010.

Results:

From a total of 8 cases with stenosis mitrale, 5 or 62.5% were female, while 3 or 37.5% male. The disease was met at all ages, most often in the age group over 65 years with 4 or 50% of cases. 5 patients or 62.5% were diagnosed with complications, 3 with tromboembolism and 2 patients with infective endocarditis.

Conclusion:

Mitral stenosis is a rheumatic vice which is associated with many complications. Its treatment can be done conservatively or surgically: commissurotomy and valvuloplasty.
Turbullimet e kristalines (katarakta), dhe kujdesi infermieror

Denada Sefo
Pedagoge ne Universitetin e Vlores

Hyrje:
Katarakta eshte nje semundje e syve qe shkaktohet nga turbullime te kristalines. Nga kataraktat me te shpeshta jane : katarakta diabetike, senile, traumatike etj. Katarakta eshte nje semundje e shpeshte e syve e cila shkaktohet nga prishja e tejdukshmerise se kristalinit. Semuren te gjitha moshat por me shume moshat e vjetra. Cdo turbuillim I kristalinit quhet katarak dhe ndeshet ne moshat 52-85 vjec. Katarakta shaktohet nga denatyrimi I proteinave, krijimi I hapesires mes fibrave, te cilat leojne futjen e lengjeve, rritjen e proliferimit te fibrave dhe kalimin e qelizave te epitelit nga kapsula per ne drejtim te qendres ( berthames ). Katarakta senile qe eshte dhe me e shpeshta kalon ne 4 faza qe jane:

a) faza fillestare
b) faza e pa –pjekur
c) faza e pjekjes
d) faza e mbi- pjekjes

Mjekimi eshte patjeter kirurgjikal.
Qellimi

Qellimi I ketij punimi eshte edukimi infermieror, keshillat, njohja dhe kujdesi infermieror per keta te semure si para operacionit dhe pas operacionit. Jo me pak e rendesishme eshte propaganda per parandalimin e semundjes me te shpekte te syve. Mjekimi adekuat i te semureve me semundje te syve ne pergjithesi si dhe kujdesi infermieror dhe trajtimi I kataraktes ne vecanti.

Materiali dhe metodat


Rezultatet:

Duke iu referuar tabelave veme re qe shumica e pacienteve ishin shtruar me diagnozen katarakt. Nga viti 2009-2011 vihet re nje ulje
e nr te te semureve. Mosha e tyre varion nga

60-80 vjec. Nr I pacienteve femra eshte pothuaj I njejte me nr I pacienteve meshkuj, pra eshte nje semundje qe prek njesoj ted y moshat. Nr I pacienteve nga rrerhet ka qene me I madh se nr I pacienteve me vendbanim ne Vlore. Shumica e pacienteve kane qene te siguruar. Nr I urgjencave spitalore ka ardhur ne rritje nga 2009-2011

Perfundimi:
Angazhimi edukativ I inermierit ne mjekimin e te semureve me katarakt ka rendesi te madhe. Kujdesi inermieror para dhe pas operacionit jo vetem per mbarevajtjen e semundjes por edhe per mbajtjen lart te moralit te te semurit jane prioritete per edukimin e nje stafi mjekesor te shendetshem. Shprehja: Me lehte eshte te parandalosh se te kurosh: duhet te vihet ne perdorim me shpesh.

Referencat:

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Collaborators

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