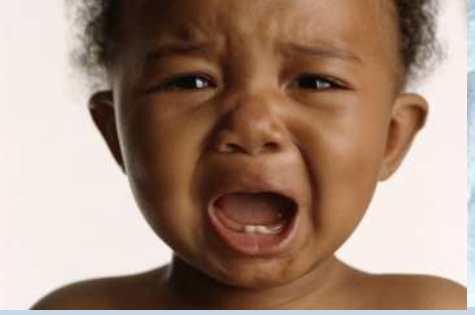
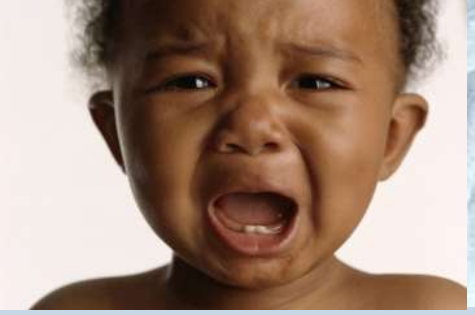





Επώδυνες διαδικασίες στα παιδιά
Ελληνική και διεθνής πραγματικότητα

Μπουτοπούλου Βαρβάρα
Νοσηλεύτρια ΠΕ, MSc, PhD, RN
Ακαδημαϊκη Υπότροφος Τμήματος
Νοσηλευτικής ΕΚΠΑ

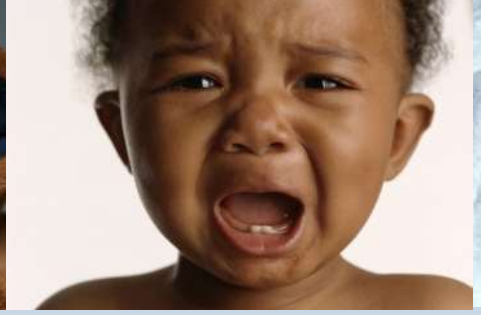





Επώδυνες διαδικασίες στα παιδιά
Ελληνική και διεθνής πραγματικότητα

- ✓Αλήθεια??
- ✓Πόσο??
- ✓Πώς??
- ✓Γιατί όχι και στην Ελλάδα???






Επώδυνες διαδικασίες στα παιδιά
Ελληνική και διεθνής πραγματικότητα

- ✓ **Αλήθεια??**
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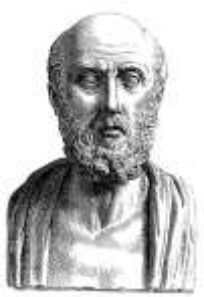
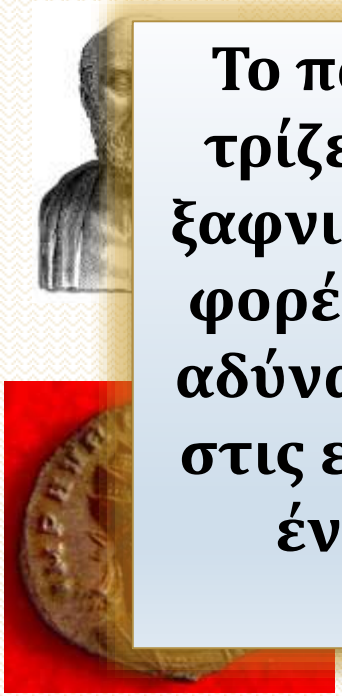
ΙΣΤΟΡΙΚΗ ΑΝΑΔΡΟΜΗ



Ιπποκράτης (4ος αιώνας πχ): Διαφορετικό σκεύασμα και δόση σε παιδιά και ενήλικες

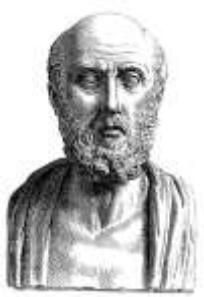
Αυρηλιανός (5ος αιώνας μχ): Συμπεριφορικά χαρακτηριστικά πόνου παιδιών

ΙΣΤΟΡΙΚΗ ΑΝΑΔΡΟΜΗ



Το παιδί μουγκρίζει στον ύπνο του, γυροφέρνει, τρίζει τα δόντια του, γυρνάει μπρούμητα, κλαίει ξαφνικά ή είναι σιωπηλό, κάνει σπασμούς, μερικές φορές είναι νυσταγμένο, το πρόσωπό του γίνεται αδύνατο και ωχρό. Το παιδί είναι κρύο και απαντά στις ερωτήσεις με δυσκολία. Μερικές φορές κάνει έντονες κινήσεις τεντώνοντας τα χέρια και ιδρώνει.

ΙΣΤΟΡΙΚΗ ΑΝΑΔΡΟΜΗ



Ιπποκράτης: Διαφορετικό σκεύασμα και δόση σε παιδιά και ενήλικες

Αυρηλιανός (5ος αιώνας μχ): Συμπεριφορικά χαρακτηριστικά πόνου παιδιών

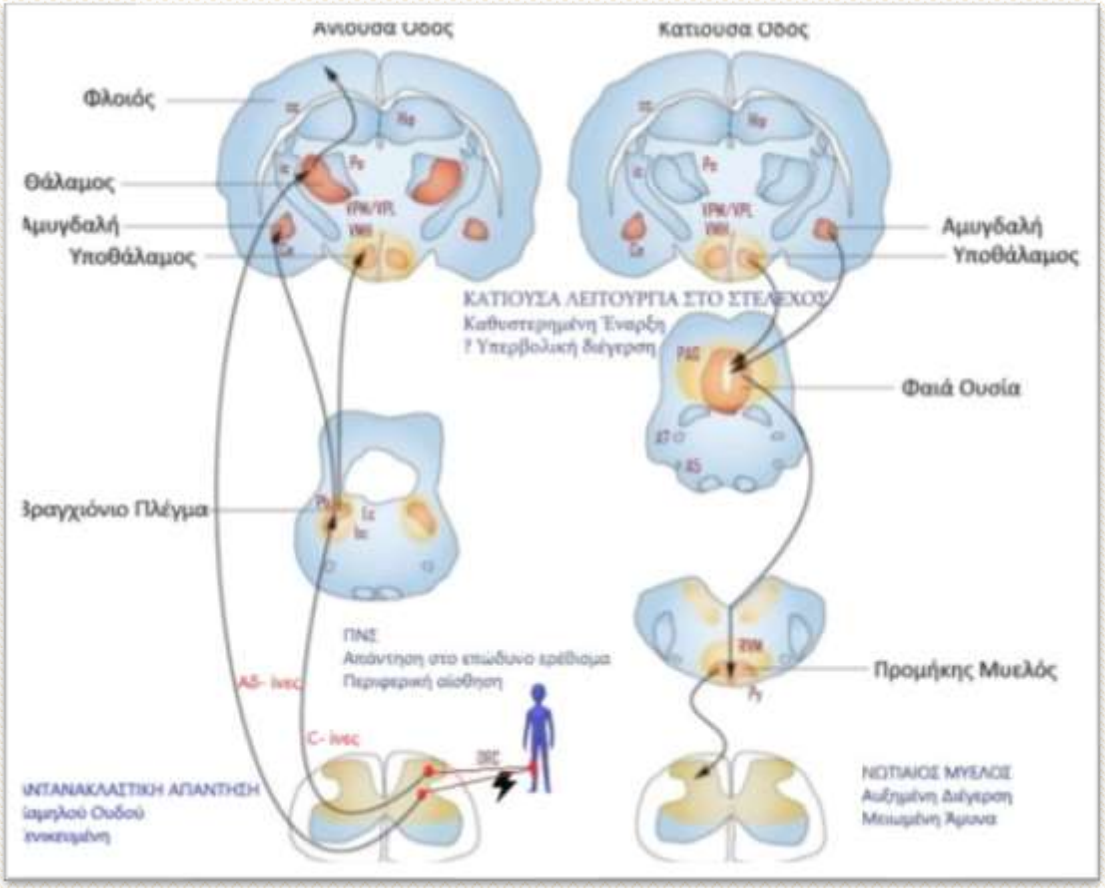
Starr (1895): Περιγραφή εκφράσεων πόνου στα παιδιά και συσχέτιση με υποκείμενη παθολογία

The New York Times

Jeffrey had holes cut on both sides of his neck, another cut in his right chest, an incision from his breastbone around to his backbone, his ribs pried apart, and an extra artery near his heart tied off. This was topped off with another hole cut in his left side for a chest tube. This operation lasted hours. Jeffrey was awake through it all. The anesthesiologist paralyzed him with Pavulon, which left him unable to move but totally conscious. When the anesthesiologist was questioned about her use of Pavulon, she said Jeffrey was too sick to tolerate powerful anesthetics and that it had never been demonstrated to her that premature babies feel pain. Jeffrey died a month after surgery. His mother later reviewed her child's medical chart and found that at no point during the surgery had her son had anesthesia. She began an impassioned crusade to change the practice of lack of anesthesia in neonatal surgery. This story led to the examination of and changes in neonatal pain practice in the United States.

1985

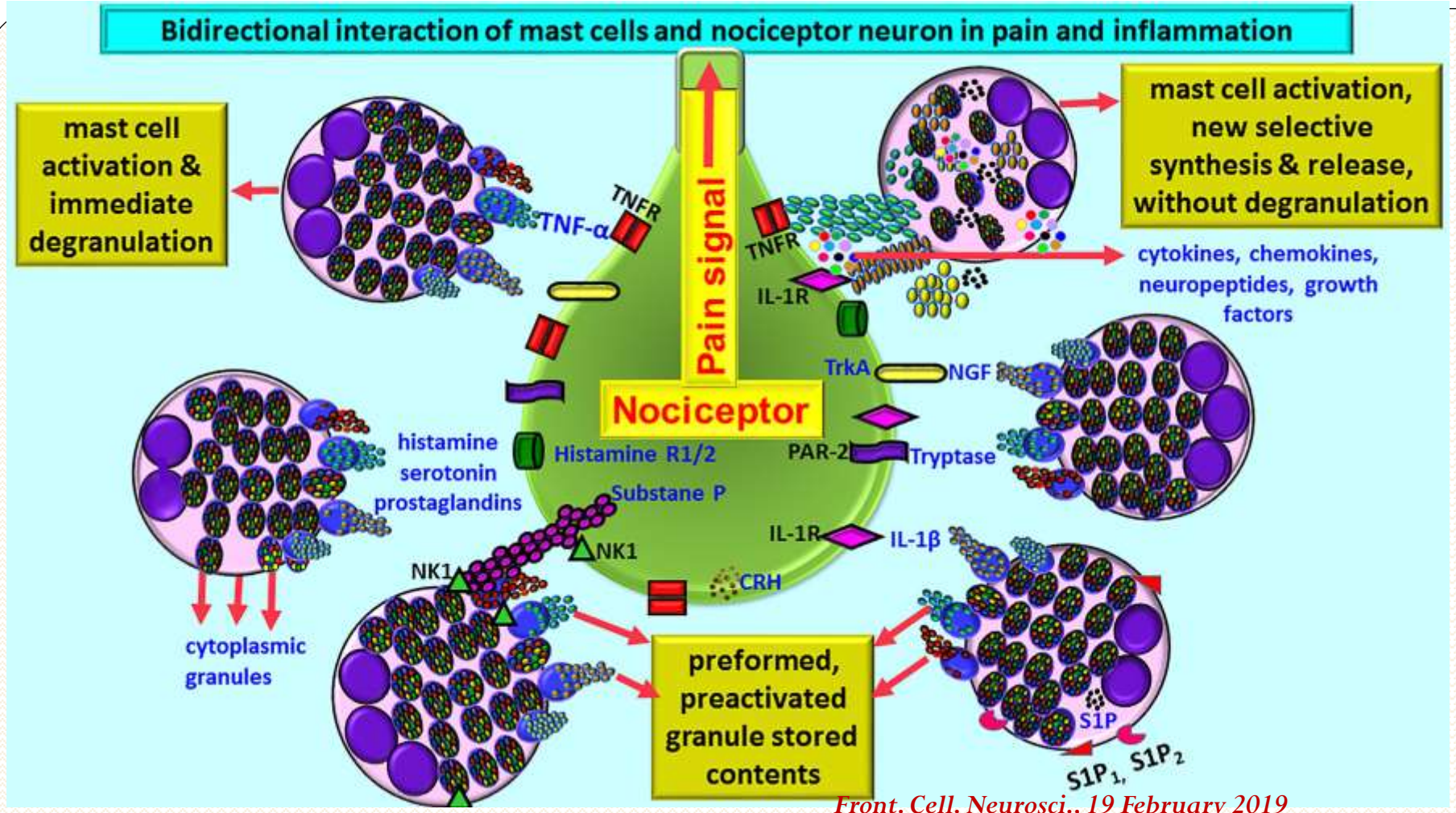
ΜΗΧΑΝΙΣΜΟΣ ΠΟΝΟΥ



Αλγαισθησία: ***Νευρική λειτουργία κατά την οποία το επώδυνο ερέθισμα αποκωδικοποιείται σε αίσθημα πόνου***

Περιλαμβάνει:

- Τη μετατροπή,
- τη μεταβίβαση,
- την τροποποίηση
- και την αντίληψη



Front. Cell. Neurosci., 19 February 2019

Title: The role of substance P, neurokinin A, neuropeptide Y and cortisol in assessing neonatal pain

Submitted, 2020

ΟΡΙΣΜΟΣ

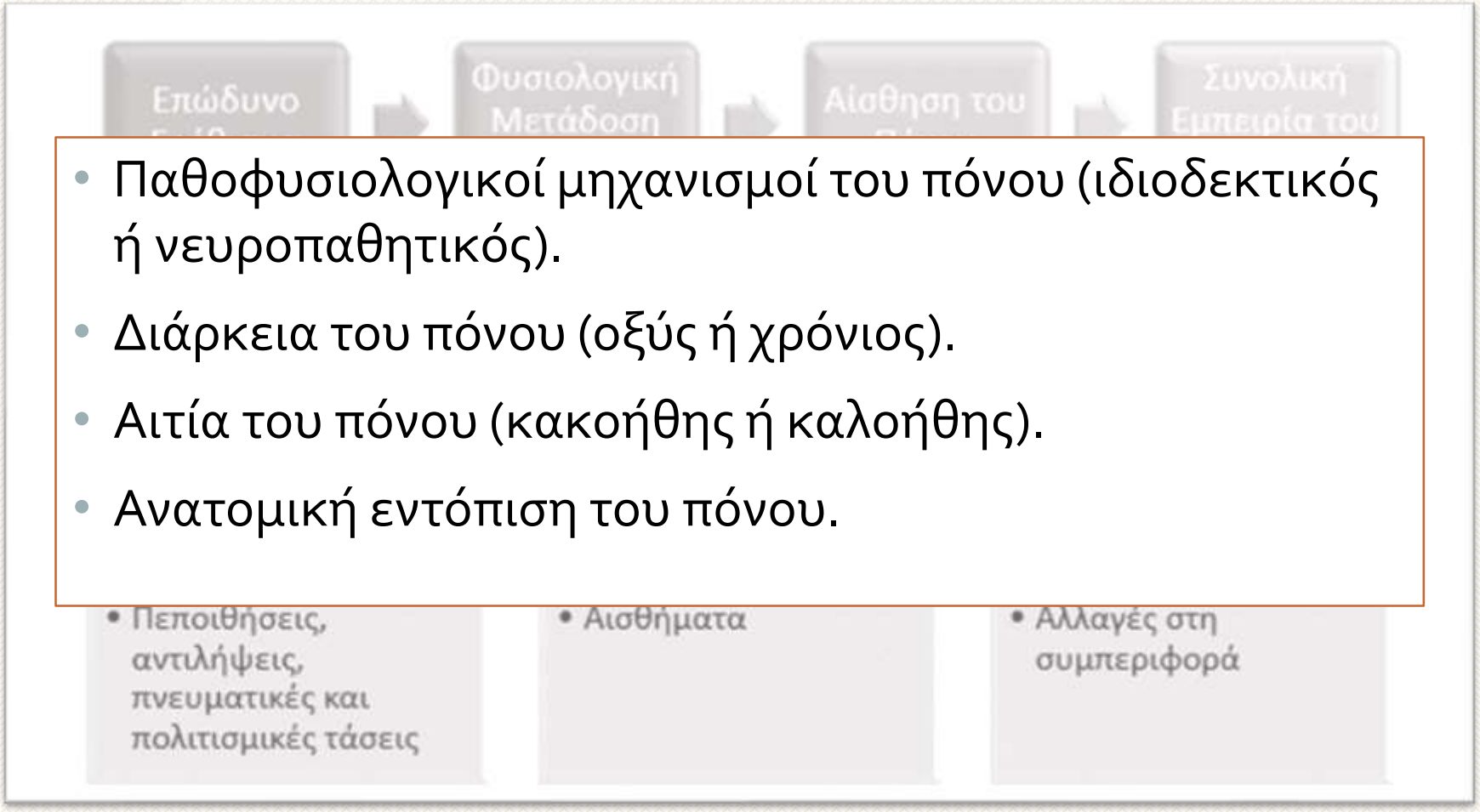
- Ένα δυσάρεστο αίσθημα και συναισθηματικό βίωμα που σχετίζεται με πραγματική ή δυνητική βλάβη των ιστών, ή περιγράφεται με όρους τέτοιας βλάβης .
- Η μη ικανότητα λεκτικής έκφρασης του πόνου δε σημαίνει ότι το άτομο δε βιώνει πόνο
- **Ο πόνος είναι πάντα υποκειμενικός**

WHO, 2012, revised in 2019

ΑΝΤΙΛΗΨΗ ΤΟΥ ΠΟΝΟΥ ΣΤΑ ΠΑΙΔΙΑ

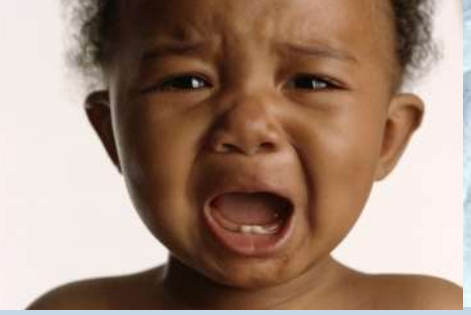
WHO, 2012, revised in 2019

ΑΝΤΙΛΗΨΗ ΤΟΥ ΠΟΝΟΥ ΣΤΑ ΠΑΙΔΙΑ



- Παθοφυσιολογικοί μηχανισμοί του πόνου (ιδιοδεκτικός ή νευροπαθητικός).
- Διάρκεια του πόνου (οξύς ή χρόνιος).
- Αιτία του πόνου (κακοήθης ή καλοήθης).
- Ανατομική εντόπιση του πόνου.






Επώδυνες διαδικασίες στα παιδιά
Ελληνική και διεθνής πραγματικότητα

- ✓Αλήθεια??
- ✓**Πόσο??**
- ✓Πώς??
- ✓Γιατί όχι και στην Ελλάδα???

- ✓ η φλεβοκέντηση,
- ✓ η οσφυονωτιαία παρακέντηση,
- ✓ η αιμοληψία,
- ✓ ο καθετηριασμός ουροδόχου κύστης,
- ✓ οι αλλαγές εγκαυμάτων και γενικά τραυμάτων
- ✓ η ανάταξη κατάγματος

Pain prevalence in hospitalized children: a prospective cross-sectional survey in four Danish university hospitals

S. Walther-Larsen[1], M. T. Pedersen[1], S. M. Friis[1], G. B. Aagaard[1], J. Rømsing[2], E. M. Jeppesen[3] and S. J. Friedrichsdorf[4,5]

Table 2 The most painful procedure/condition in children in the previous 24 h

	N = 213 (VAS>0)	Worst pain score *
Needle pokes	77 (36%)	3.8 (2.7–6.8)
Other invasive procedures†	43 (20%)	4.4 (2.7–6.5)
Accident/injury, other medical	42 (20%)	6.5 (5.0–7.3)
Acute illness		
Known disease		
Surgery		

Conclusion: This study reveals high pain prevalence in children across all age groups admitted to four Danish university hospitals. The majority of children in moderate to severe pain did not have a documented pain assessment, and evidence-based pharmacological and/or integrative ('non-pharmacological') measures were not systematically administered to prevent or treat pain. Thus, practice changes are needed.

Acta Anaesthesiologica Scandinavica, 2016

EJP
European Journal of Pain

SYSTEMATIC REVIEW

Epidemiology of painful procedures performed in neonates: A systematic review of observational studies

M.D. Cruz[1,3], A.M. Fernandes[2,3], C.R. Oliveira[4,5]

1 Nursing School of the University of Évora, Portugal
2 Nursing School of Coimbra, Portugal
3 Health Sciences Research Unit, Nursing hosted by the Nursing School of Coimbra, Portugal
4 Faculty of Medicine of the University of Coimbra, Portugal
5 CNC-Center for Neuroscience and Cell Biology, University of Coimbra, Portugal

Eur J Pain ▪▪ (2015) ▪▪▪▪

Abstract

Background and objective: Procedural pain in neonates has been a concern in the last two decades. The purpose of this review was to provide a critical appraisal and a synthesis of the published epidemiological studies about procedural pain in neonates admitted to intensive care units. The aims were to determine the frequency of painful procedures and pain management interventions as well as to identify their predictors.

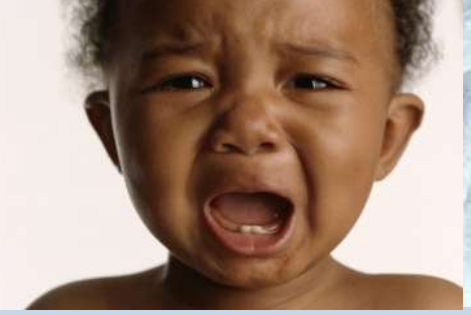
Databases and data treatment: Academic Search, CINAHL, LILACS, Medic Latina, MEDLINE and SciELO databases were searched for observational studies on procedural pain in neonates admitted to intensive care units. Studies in which neonatal data could not be extracted from the paediatric population were excluded.

Results: Eighteen studies were included in the review. Six studies with the same study duration, the first 14 days of the neonate life or admission in the unit of care, identified 6832 to 42,413 invasive procedures, with an average of 7.5–17.3 per neonate per day. The most frequent procedures were heel lance, suctioning, venepuncture and insertion of peripheral venous catheter. Pharmacological and nonpharmacological approaches were inconsistently applied. Predictors of the frequency of procedures and analgesic use included the neonate's clinical condition, day of unit stay, type of procedure, parental presence and pain assessment. The existence of pain protocols was not a predictor of analgesia.

Conclusions: Painful procedures were performed frequently and often with inadequate pain management. Unlike neonate clinical factors, organizational factors may be modified to promote a context of care more favourable to pain management.

- ✓19 πρωτογενείς μελέτες
- ✓6832-42,413 επεμβατικές διαδικασίες με **7,5-17,3 ανά νεογνό ανά ημέρα**
- ✓Συχνότερες επώδυνες παρεμβάσεις: λήψη αίματος από τη φτέρνα, αναρρόφηση, παρακέντηση και τοποθέτηση περιφερικού φλεβικού καθετήρα.
- ✓Η αναλγησία δεν ήταν ενταγμένη στα ιατρονοσηλευτικά πρωτόκολλα
- ✓Η διαχείριση του πόνου πρέπει να ενταχθεί πιο συστηματικά στην καθημερινή φροντίδα νεογνών.






Επώδυνες διαδικασίες στα παιδιά
Ελληνική και διεθνής πραγματικότητα

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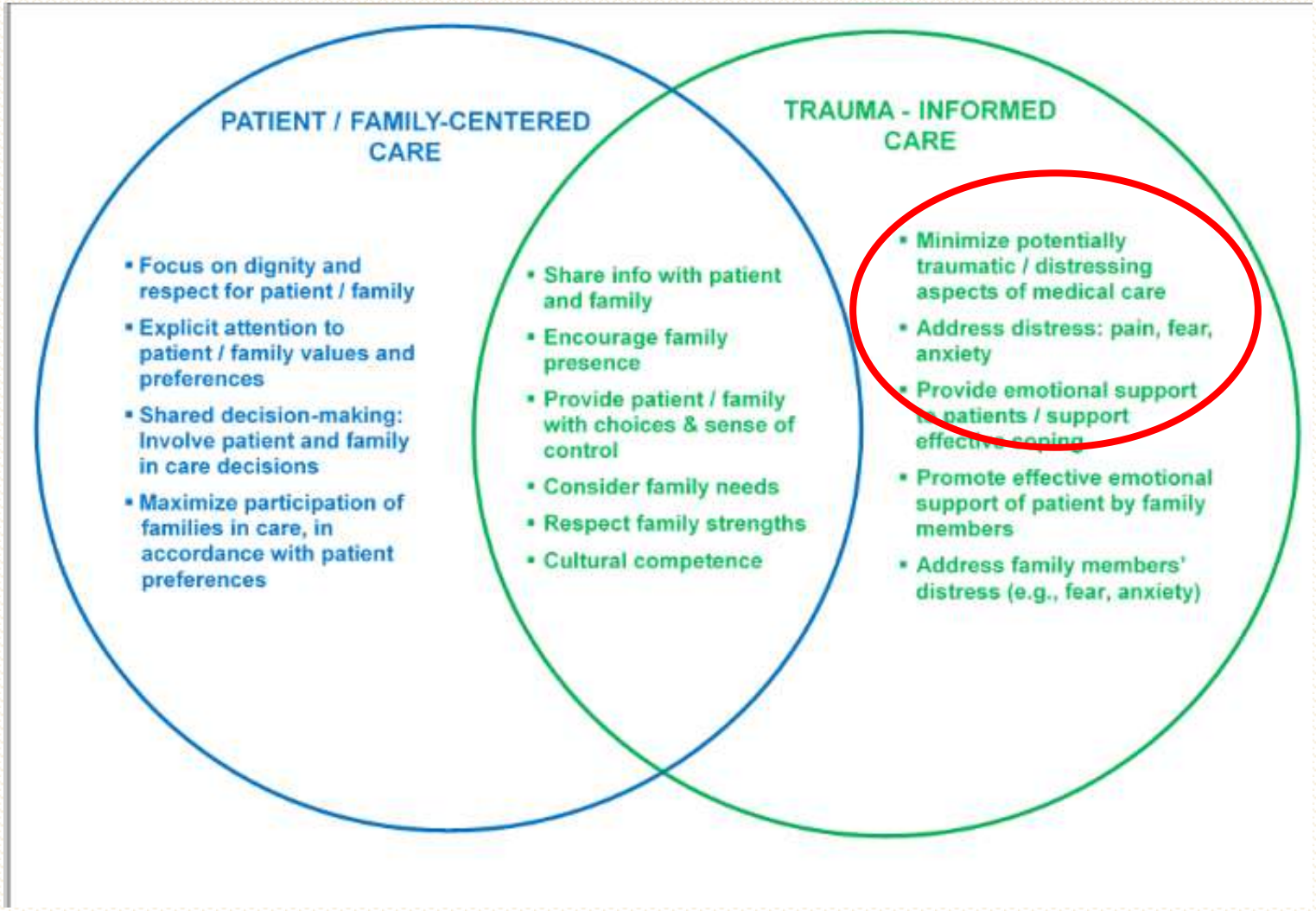
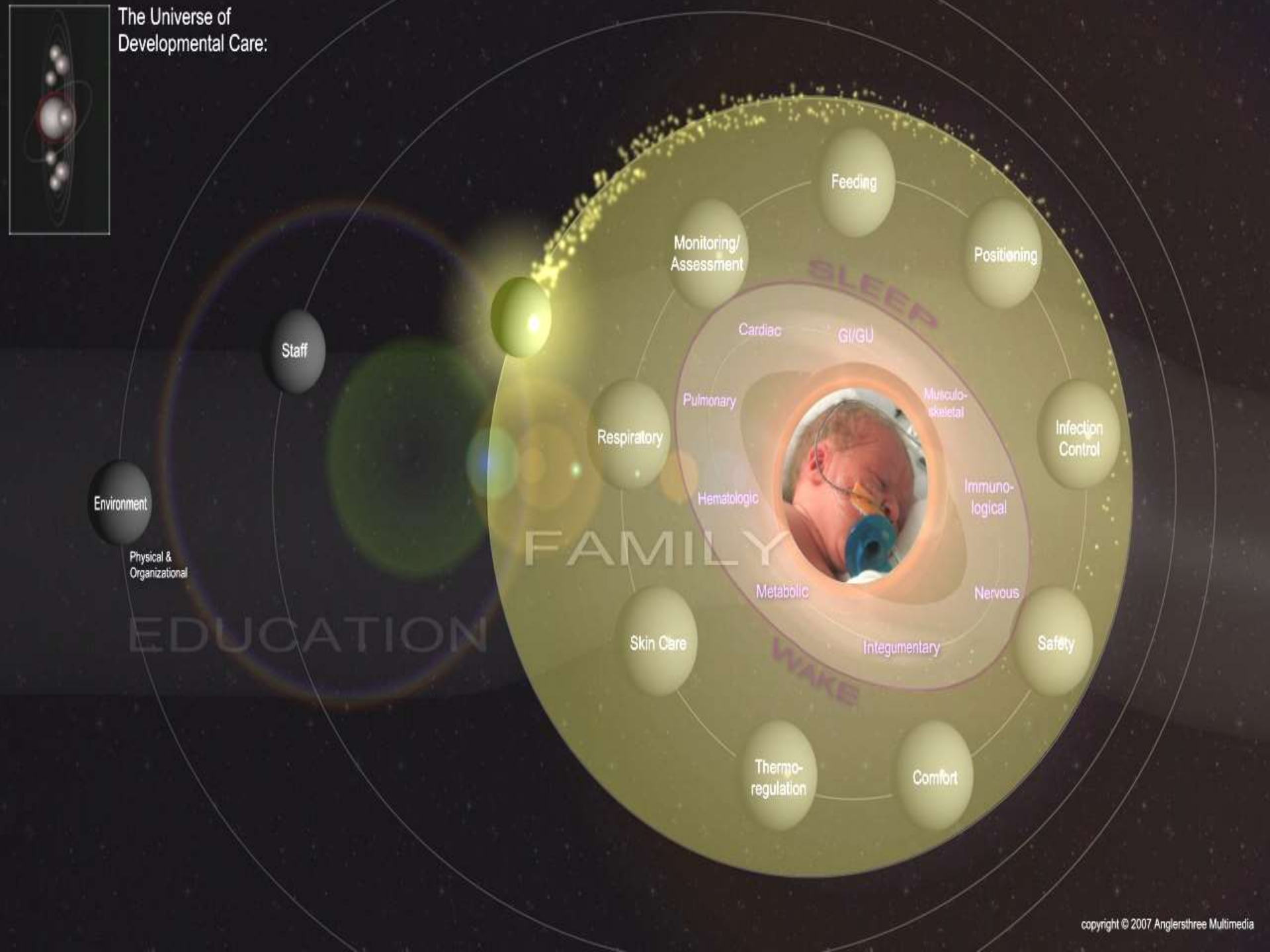


AAP Committee on Hospital Care, 2015


The Universe of Developmental Care:
Staff
Environment
Physical & Organizational
EDUCATION
Feeding
Monitoring/ Assessment
Positioning
SLEEP
Cardiac
GI/GU
Pulmonary
Musculo-skeletal
Respiratory
Infection Control
Hematologic
Immuno-logical
FAMILY
Metabolic
Nervous
Skin Care
Integumentary
Safety
WAKE
Thermo-regulation
Comfort
copyright © 2007 Anglersthree Multimedia

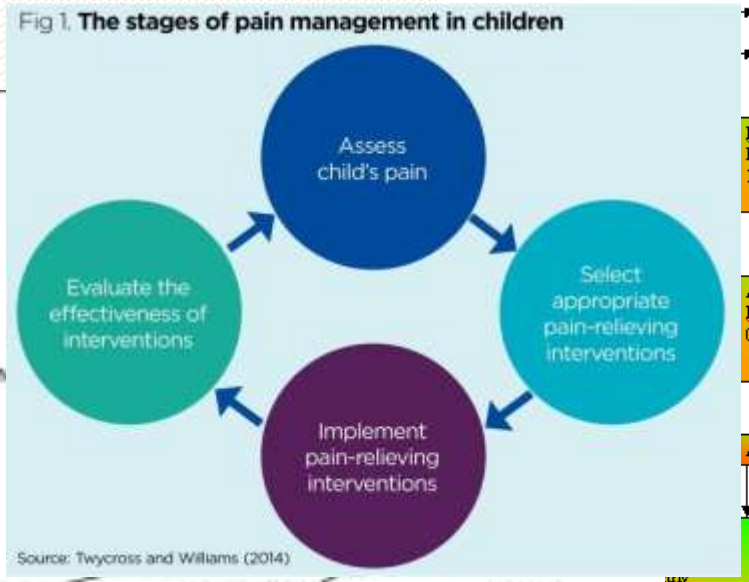
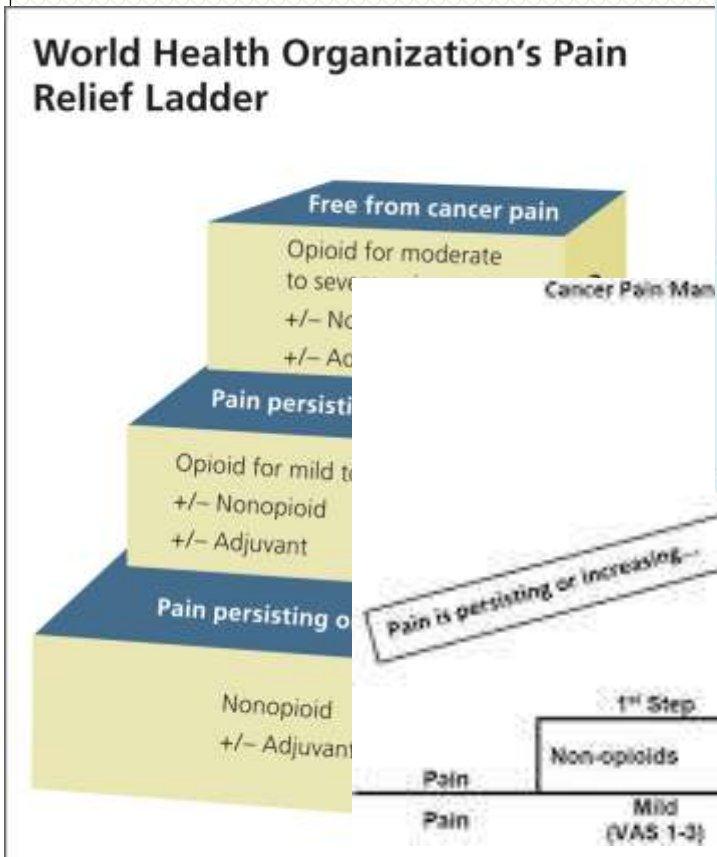
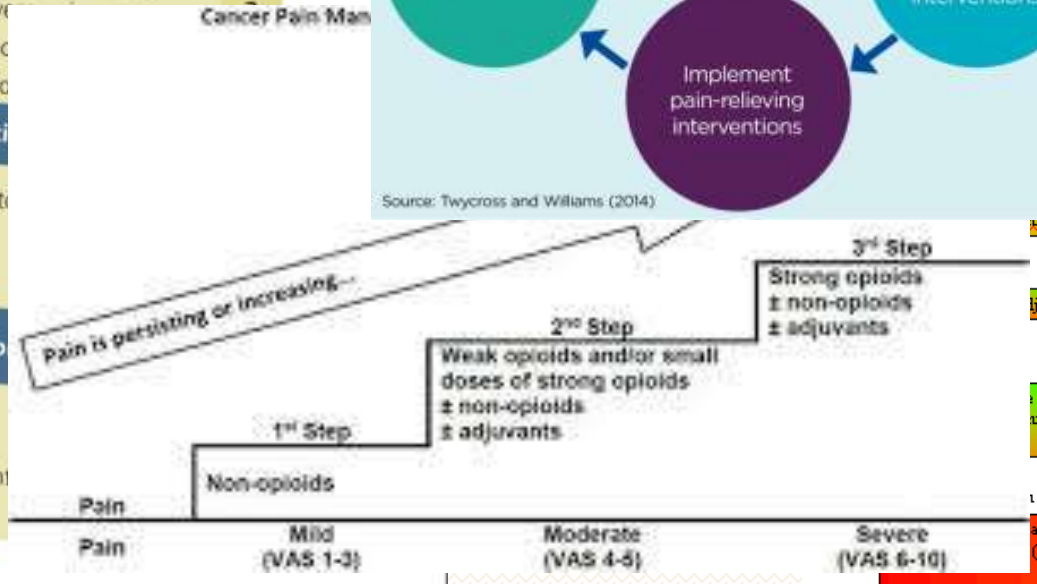
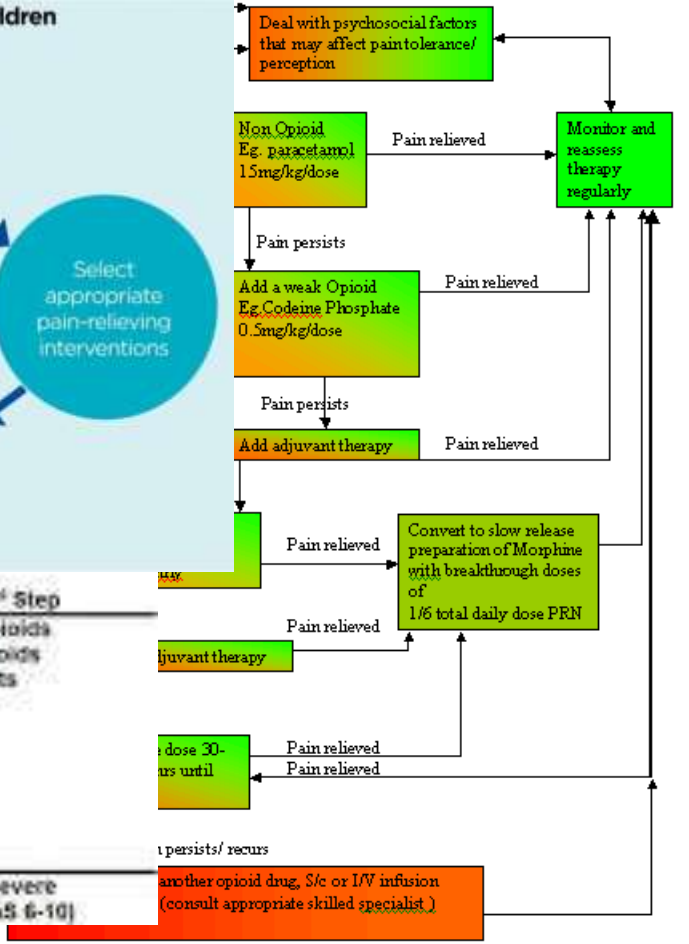


Fig 1. The stages of pain management in children
Assess child's pain
Select appropriate pain-relieving interventions
Implement pain-relieving interventions
Evaluate the effectiveness of interventions
Source: Twycross and Williams (2014)


World Health Organization's Pain Relief Ladder
Free from cancer pain
Opioid for moderate
+/– Nonopioid
+/– Adjuvant
Pain persisting
Nonopioid
+/– Adjuvant


Pain is persisting or increasing
3rd Step
Strong opioids
± non-opioids
± adjuvants
2nd Step
Weak opioids and/or small doses of strong opioids
± non-opioids
± adjuvants
1st Step
Non-opioids
Pain
Pain
Mild (VAS 1-3)
Moderate (VAS 4-6)
Severe (VAS 6-10)


Deal with psychosocial factors that may affect pain tolerance/ perception
Non Opioid Eg. paracetamol 15mg/kg/dose
Pain relieved
Monitor and reassess therapy regularly
Pain persists
Add a weak Opioid Eg.Codeine Phosphate 0.5mg/kg/dose
Pain relieved
Pain persists
Add adjuvant therapy
Pain relieved
Pain relieved
Convert to slow release preparation of Morphine with breakthrough doses of 1/6 total daily dose PRN
Pain relieved
Pain relieved
Pain relieved
persists/ recurs
another opioid drug, S/c or I/V infusion (consult appropriate skilled specialist)

- ✓ Προετοιμασία παιδιού
- ✓ Προετοιμασία οικογένειας
- ✓ Φαρμακολογική και μη φαρμακολογική αντιμετώπιση
- ✓ Εκπαίδευση διεπιστημονικής ομάδας

Children's Health Care, 2017

SUPPLEMENT ARTICLE

Behavioral Approaches to Anxiety and Pain Management for Pediatric Venous Access

Pediatrics 2017

Procedural Preparation and Support as a Standard of Care in Pediatric Oncology

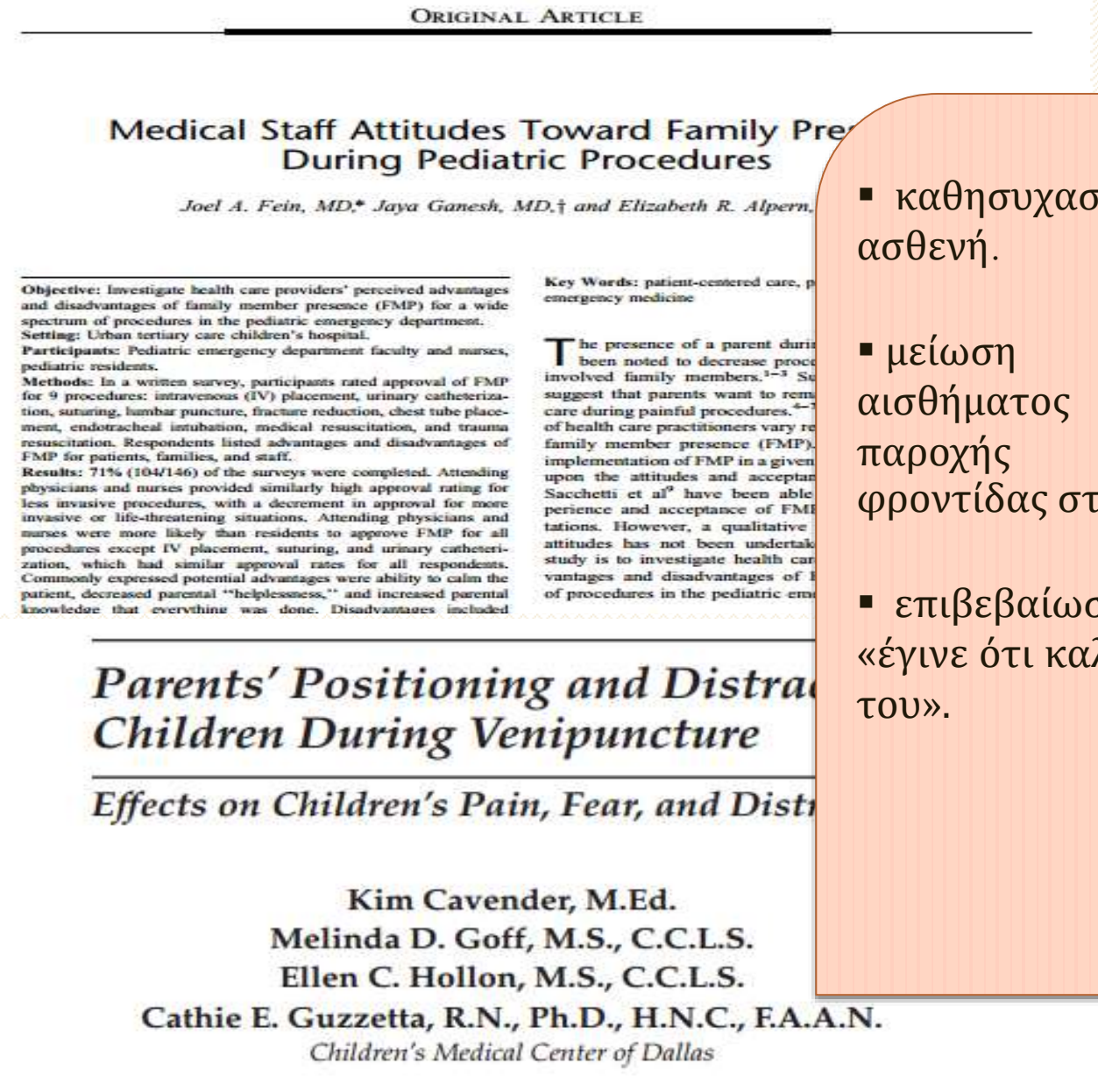
Stacy R. Flowers, PsyD[1]* and Kathryn A. Birnie, BA (Hons)[2,3]

Pediatr Blood Cancer 2015

Psychological interventions for needle-related procedural pain and distress in children and adolescents (Review)

Birnie KA, Noel M, Chambers CT, Uman LS, Parker JA

Cohrane Library, 2018



ORIGINAL ARTICLE

Medical Staff Attitudes Toward Family Pre
During Pediatric Procedures

Joel A. Fein, MD, Jaya Ganesh, MD,† and Elizabeth R. Alpern,*

Objective: Investigate health care providers' perceived advantages and disadvantages of family member presence (FMP) for a wide spectrum of procedures in the pediatric emergency department.
Setting: Urban tertiary care children's hospital.
Participants: Pediatric emergency department faculty and nurses, pediatric residents.
Methods: In a written survey, participants rated approval of FMP for 9 procedures: intravenous (IV) placement, urinary catheterization, suturing, lumbar puncture, fracture reduction, chest tube placement, endotracheal intubation, medical resuscitation, and trauma resuscitation. Respondents listed advantages and disadvantages of FMP for patients, families, and staff.
Results: 71% (104/146) of the surveys were completed. Attending physicians and nurses provided similarly high approval rating for less invasive procedures, with a decrement in approval for more invasive or life-threatening situations. Attending physicians and nurses were more likely than residents to approve FMP for all procedures except IV placement, suturing, and urinary catheterization, which had similar approval rates for all respondents. Commonly expressed potential advantages were ability to calm the patient, decreased parental "helplessness," and increased parental knowledge that everything was done. Disadvantages included

Key Words: patient-centered care, p
emergency medicine

The presence of a parent duri
been noted to decrease proce
involved family members.[1–3] Su
suggest that parents want to rem
care during painful procedures.[4–
of health care practitioners vary re
family member presence (FMP).
implementation of FMP in a given
upon the attitudes and acceptan
Sacchetti et al[9] have been able
perience and acceptance of FM
tations. However, a qualitative
attitudes has not been undertak
study is to investigate health car
vantages and disadvantages of
of procedures in the pediatric em

Parents' Positioning and Distra
Children During Venipuncture

Effects on Children's Pain, Fear, and Distr

Kim Cavender, M.Ed.
Melinda D. Goff, M.S., C.C.L.S.
Ellen C. Hollon, M.S., C.C.L.S.
Cathie E. Guzzetta, R.N., Ph.D., H.N.C., F.A.A.N.
Children's Medical Center of Dallas

- καθησυχασμός του μικρού ασθενή.
- μείωση του γονικού αισθήματος ανικανότητας παροχής βοήθειας και φροντίδας στο παιδί.
- επιβεβαίωση του γονέα ότι «έγινε ότι καλύτερο για το παιδί του».

Health Information

More Information

Pain Management Program at CHOP

Related Health Information

Online Resources - The Child Having Surgery

Pain Control

Will my child be in pain after surgery?

After surgery, there may be physical causes of pain, but the sensation of pain also depends on complex mental and emotional factors. Determining the level of pain that your child has can be very challenging. The surgical team may use a scale of 0 to 10 or illustrations of faces to help your child describe pain. The physicians caring for your child can determine what is usual discomfort for a certain operation and give the prescribed medication; however, as parents, you know your child best. If your child is unusually agitated or withdrawn, you should let your child's healthcare team know so they can further assess the effectiveness of the prescribed medication.

What pain medications will my child receive?

There are a wide variety of pain medications that your child can receive. Your child's physician will order the specific medication(s) he/she thinks will be most effective. Your child's physician will determine this by the type of surgery your child had, your child's age and development, and any previous experience your child has had with surgery and administration of pain medications.

If your child has moderate to severe pain, he/she will most likely receive narcotics during

Hindawi Publishing Corporation
International Journal of Pediatrics
Volume 2013, Article ID 849469, 6 pages
http://dx.doi.org/10.1155/2013/849469

Hindawi

Clinical Study

HEADPLAY Personal Cinema System Facilitates Intravenous Cannulation in Children: A Randomized Controlled Trial

Evangeline Lim,[1] Teddy Fabila,[1] Thong Sze Ying,[2] and Josephine Tan[1]

[1] *Department of Paediatric Anaesthesia, KK Women's and Children's Hospital, Singapore*
[2] *Department of Anaesthesiology, Singapore General Hospital, Singapore*

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JOURNAL FOR SPECIALISTS IN PEDIATRIC NURSING
the international evidence-based practice journal for nurses caring for children and families

Journal for Specialists in Pediatric Nursing

ORIGINAL ARTICLE

Effect of distraction on children's pain during intravenous catheter insertion

Tahereh Sadeghi, Nooredin Mohammadi, Mahmood Shamshiri, Rafat Bagherzadeh, and Navabeh Hossinkhani

Tahereh Sadeghi, MSN, RN, is a PhD Candidate, Department of Pediatric Nursing, Faculty of Nursing and Midwifery; Nooredin Mohammadi, PhD, RN, is an Assistant Professor, Department of Critical Care Nursing, Faculty of Nursing and Midwifery, Brain and Spinal Cord Injury Research Centre, Centre for Nursing Research; Mahmood Shamshiri, MSN, RN, is a PhD Candidate, Department of Medical-Surgical Nursing, Faculty of Nursing and Midwifery; Rafat Bagherzadeh, MA, is a Faculty Member, Department of English Language, Tehran University of Medical Sciences and Health Services; and Navabeh Hossinkhani, MSN, RN, is a Lecturer, Shahed University, Nursing and midwifery faculty, Tehran, Iran [Corrected after online publication March 5, 2013: Affiliation, Shahed University, Nursing and midwifery faculty, Tehran, Iran, given incorrectly in the published article.]

Acta Paediatr. 2013 Oct 12. doi: 10.1111/apa.12459. [Epub ahead of print]

Sucrose for procedural pain control in infants: should we change our practice?

Lago P, Garetti E, Pirelli A, Merazzi D, Bellieni C, Savant Levet P, Pieragostini L, Ancora G; The Pain Study Group of the Italian Society of Neonatology.

Neonatal Intensive Care Unit, Department of Women's and Children's Health, Azienda Ospedaliera- University of Padova, Via Giustiniani, 3, 35128, Padova, Italy.

Abstract

Pain is an adverse effect that must be prevented and controlled at any age. Numerous guidelines consider the administration of sweet solutions as standard of care for controlling pain during minor invasive procedures in neonates (1,2). According to the latest Cochrane Review, sucrose is safe a effective in reducing single episodes of minor procedural pain (3). It reduces behavioural expressions of pain and crying time, as well as the scores obtained using validated neonatal pain scales such as the Premature Infant Pain Profile (PIPP) scale (4). The PIPP has been universally accepted being capable of detecting and measuring the presence of acute pain, even in very preterm infants (5). This article is protected by copyright. All righ reserved.

✓ Πρόσφατες μελέτες και συστηματικές ανασκοπήσεις ανέδειξαν την αποτελεσματικότητα της πόσιμης σουκρόζης, ως μη φαρμακευτική παρέμβαση σε νεογνά στην ανακούφιση του πόνου από επώδυνες παρεμβάσεις.

Published in final edited
Clin Perinatol. 2014 De

Pain Manageme

Richard W. Hall, M.D.
University of Arkansas

Kanwaljeet J. S. Anan
Anesthesiology, Anatomy & Neurobiology]
University of Tennessee Health Science Center, Memphis, Tennessee

The Safety and Efficacy of Oral Dextrose for Relieving Pain Following Venepuncture in Neonates

J M Ling, MMed, B S Quah, FRCP, H Van Rostenberghe, MD

Department of Paediatrics, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan

Summary

The objective of this study was to assess the efficacy and safety of oral 30% dextrose during venepuncture in neonates. Neonates admitted to the Special Care Nursery for jaundice from September 2000 to January 2001 were recruited for this double-blind randomised controlled trial. The intervention consisted of administration of either 2 ml of oral 30% dextrose or 2ml of sterile water 2 minutes before venepuncture. The primary outcome measure was the cumulative Neonatal Infant Pain Scale (NIPS) score at 3 minutes after venepuncture and the duration of cry assessed from a videotaped recording. Twenty-six neonates received 30% dextrose and 26 neonates received sterile water. The cumulative NIPS score at 3 minutes (median, IQR) after venepuncture for neonates given 30% dextrose (13, 6.8-21) was significantly ($p=0.03$) lower than that for neonates given sterile water (21, 13.8-23). The duration of cry in neonates given 30% dextrose (median 45 sec IQR 15-180.8 sec) was significantly ($p=0.05$) shorter than that in neonates given sterile water (median 191 sec IQR 52.5-250 sec). No neonates developed diarrhoea, fever or rash during the 24 hour observation period. Both the inter-rater (ICC 0.933-98% CI 0.984-0.996) and intra-rater (ICC 0.988-95% CI 0.980-0.993) agreement on the 3-minute NIPS score were good. In conclusion, oral 30% dextrose given 2 minutes before venepuncture was effective in reducing neonatal pain following venepuncture. It is simple, safe and fast acting analgesic and should be considered for minor invasive procedure in term neonates.

Key Words: 30% dextrose, Pain, Analgesia, Venepuncture, Neonates

[Intervention Review]

Sucrose for analgesia in newborn infants undergoing painful procedures

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nalgesia in newborn infants undergoing painful procedures. *Cochrane*
9. DOI: 10.1002/14651858.CD001069.pub4.

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TRACT

king is the most frequently studied non-pharmacological intervention

To determine the efficacy, effect of dose and safety of oral sucrose for relieving procedural pain in neonates.

Search methods

We used the standard methods of the Cochrane Neonatal Review Group. Electronic and manual searches were performed in November 2011 for published randomised controlled trials (RCTs) in MEDLINE (1950 to November 2011), EMBASE (1980 to 2011), CINAHL (1982 to November 2011) and the Cochrane Central Register of Controlled Trials (*The Cochrane Library*). We did not impose language restrictions.

Selection criteria

RCTs in which term, preterm, or both term and preterm neonates (postnatal age maximum of 28 days after reaching 40 weeks' post-menstrual age) received sucrose for procedural pain. Control conditions included no treatment, water, pacifier, positioning/containing or breastfeeding.

Data collection and analysis

Main outcome measures were physiological, behavioural, or both pain indicators with or without composite pain scores. A mean difference (MD) with 95% confidence intervals (CI) using the fixed-effect model was reported for continuous outcome measures. Trial quality was assessed as per The Cochrane Collaboration

Use of EMLA cream as a topical anaesthetic before venepuncture procedures in field surveys: A practice that helps children, parents and health professionals

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Department of Public Health, School of
University of KwaZulu Natal, Durban,

Corresponding author: *T P Gwela (tgw*

Background. Topical analgesia is be
is known about the frequency of tha
Methods. We investigated the use o
of 20 children did not receive any k
procedure were assessed using a sub
immediately after the procedure.
Results. The use of EMLA cream re
effect). Participants who received E
researcher were also significantly lo
the children could continue with ot
were in favour of EMLA cream.
Conclusion. EMLA cream was safe
believe that it merits a place in the
research studies and field surveys. F

S Afr Med J 2015;105(7):600-602. DOI:10.7

Children in healthc
procedures daily.
participants is also b
in many research
researchers have statu
are distressing to children and their fa
performing the procedure;[1,2] the succe
provider relationship. We could find
efficacy of EMLA cream in a field
pain related to short procedures. Du
procedures continues to be inadequate

Topical analgesia is becoming esse
screening procedures and health su
steadily. Children often do not unde
to needle procedures such as phleb
the frequency of these invasive pro
interventions to ease the pain. A eutect
(EMLA), which consists of 2.5% lid
a topical analgesic that works by blo
brain. Few studies have addressed wh
influences venepuncture success and
rates of children in research studies on
the efficacy of EMLA cream in pr
children in a field setting. When
environment, this non-invasive me
expected to minimise distress duri
The implications for practice and th
and participants are expected to res
screening.

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JA Clinical Reports

CLINICAL RESEARCH ARTICLE Open Acces

The eutectic mixture local anesthetics (EMLA) cream is more effective on venipuncture pain compared with lidocaine tape in the same patients

Tomomi Matsumoto[1], Tomohiro Chaki[2*], Naoyuki Hirata[1] and Michiaki Yamakage[2]

Abstract

Introduction: Although venous cannulation is imperative during perioperative period, it inevitably causes venipuncture pain. Eutectic mixture local anesthetics (EMLA) has been used to reduce this pain, and various studies have been conducted to evaluate the efficacy of EMLA. But these studies did not elucidate the effect of EMLA exactly, because there were large individual differences in pain sensitivity. The aim of this study is to accurately evaluate the efficacy of EMLA cream for venipuncture pain relief compared with lidocaine tape in the same patients.

Methods: Participants were randomly allocated into EL or LE group. Participants received EMLA cream at one side dorsum of hand and lidocaine tape at another dorsum of hand before entering operation room. Local anesthetics were strictly applied according to their manufacturers' instruments, respectively. In the EL group, participants received venipuncture at EMLA cream site firstly. In LE group, participants, conversely, received venipuncture at lidocaine tape site firstly. Before anesthetic induction, local anesthetics were removed followed by venous cannulations. After cannulation, participants evaluated the pain by visual analog scale (VAS) and verbal rating scale (VRS).The primary outcome was VAS, and the secondary outcome was VRS.

Results: Data from 24 patients were analyzed. The VAS of EMLA cream was significantly lower than that of lidocaine tape (4 [0–18] vs 17 [8–45], $p = 0.001$, 95% CI − 25 to − 6). The VRS of EMLA cream was also significantly lower than that of lidocaine tape (2 [1–2] vs 2 [2–3], $p = 0.002$, 95% CI − 0.8 to − 0.2). The local skin adverse events were observed in five patients at EMLA cream applied hands.

Conclusions: We conducted a comparative study to elucidate the efficacy of EMLA cream for venipuncture-pain comparing with lidocaine tape in the same patients. Our results strongly suggest that EMLA cream is more effective for venipuncture pain relief than lidocaine tape.

Trial registrations: UMIN Clinical Trials Registry, UMIN000023030. Registered 5 July 2016.

Keywords: Anesthesia, Local, Catheterization, Peripheral, Pain management

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Published online 2014 May 15. Research Article

Topical Anesthetic Effect of EMLA and Iranian Products in Preventing Pain During Intravenous Blood Sampling Procedures: A Double-Blind Randomized Clinical Trial

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Received: November 11, 2013; Revised: December 15, 2013; Accepted: April 1, 2014

Background: The patients' concerns about injection pain can cause some unwanted adverse reactions such as hypotension, vasovagal shock, syncope, and unconsciousness. Therefore, using a skin anesthetic can facilitate performing many medical procedures.
Objectives: This double-blind randomized clinical trial was designed to compare the anesthetic effect of topical EMLA 5% cream with Iranian lidocaine 5% and benzocaine 5% creams.
Patients and Methods: Sixty-four healthy volunteers were randomly allocated into two groups. In each individual, EMLA cream and one of Iranian topical anesthetic products, namely lidocaine 5% and benzocaine 5%, were tested. One hour before blood sampling, a predetermined amount of A or B cream was used on the right cubital fossa and the same amount of C or D cream on the left cubital fossa. Blood sampling was done via cubital fossa veins with a 2 cc syringe. The pain of blood sampling was recorded using visual analogue scale (VAS). Data were analyzed by student t-test and ANOVA using SPSS version 11.
Results: At the end of study, the EMLA products [A and B] caused a significant decrease in pain ($P < 0.01$) in comparison with the products C [lidocaine] and D [benzocaine] while there was no differences between benzocaine and lidocaine. In this study, no significant side effect was observed.
Conclusions: Although the results of the study showed superiority of application of EMLA cream as a topical anesthetic for pain relief of blood sampling, both lidocaine 5% and benzocaine 5% offer considerable efficacy in pain relief of venipuncture.

Keywords: Pain Management; EMLA; Anesthetics; Topical

1. Background

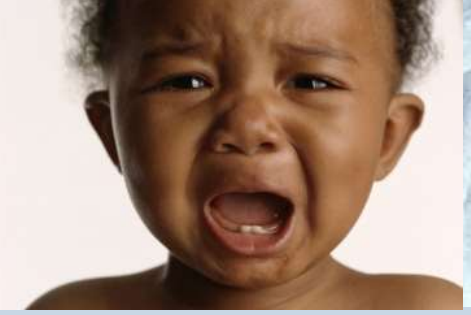
Pain management facilitates accomplishment of many medical procedures like blood sampling and injections particularly for children vaccination and lases hair removal. Fixing intravenous catheters in patients causes anxiety and leads to some reactions like hypotension, vasovagal shock, syncope, and unconsciousness. Patient anxiety and fear of injection lead to some problems for nurses; therefore, pain reduction is very important to them. If the pain of venous blood sampling reduces, success rate will be greater, the blood vessels will be damaged less frequently, and access to other vessels will be more possible. Various treatment methods and strategies have been suggested for pain reduction including injections tourniquets, topical treatments, and nonpharmacologic among which the topical treatment is a more tolerable one (1, 2). EMLA 5% cream (25 mixture of benzocaine and lidocaine) is a eutectic mixture; it means that melting point of the two agents reduces when mix with each other. Consequently, they will form a eutectic liquid at the temperatures higher than 16-17° C. This makes a concentration gradient on the skin that facilitates the absorption. EMLA cream is widely used for painful processes like curettage, laser therapy of vascular lesions, skin biopsy, phimosis, shock wave lithotripsy (SWL), and cryotherapy of oral ulcers (3-6). In Iran, lidocaine is usually used for topical anesthesia.

2. Objectives

The aim of this study was to compare the efficacy and

Implication for health policy/practice/research/medical education:



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- ✓Αλήθεια??
- ✓Πόσο??
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- **✓Γιατί όχι και στην Ελλάδα???**

Validation of the Greek Version of Comfort-B, FLACC, and BPS Scales in Critically Ill Children and Their Association with Clinical Severity

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Perceptions of children and their parents about the pain experienced during their hospitalization and its impact on parents' quality of life FREE

Japanese Journal of Clinical Oncology, 2016

A randomized clinical trial of a brief hypnosis intervention to control venepuncture-related pain of paediatric cancer patients.

Liossi C[1], White P, Hatira P.

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Predictive Factors of Postoperative Pain and Postoperative Anxiety in Children Undergoing Elective Circumcision: A Prospective Cohort Study

Nick Zavras,[✉] Stella Tsamoudaki,[*] Vasileia Ntomi, Ioannis Yiannopoulos,[†] Efstratios Christianakis,[*] and Emmanuel Pikoulis[‡]

Korean J Pain. 2015

Αντί συμπερασμάτων…