

NADZOR PACIENATA SA EPIDURALNOM ANALGEZIJOM

Univerza v Ljubljani



Neli Stošič Vintar
Medicinski fakultet Univerziteteta u Ljubljani
Univerzitetški klinički centar Ljubljana

univerzitetni
klinični center ljubljana
University Medical Centre Ljubljana

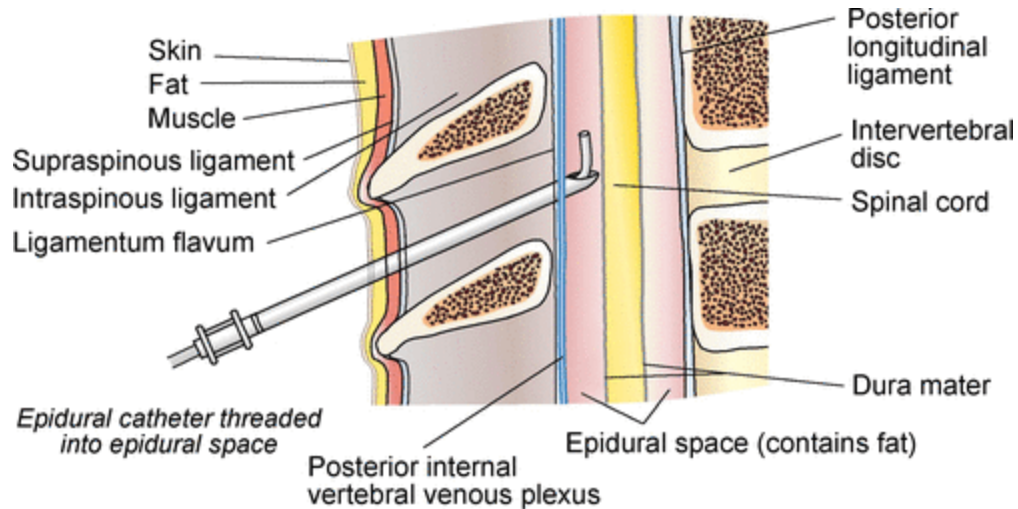


BANJA LUKA & TUZLA 28. / 29.novembar 2019

Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

EPIDURALNA ANALGEZIJA



Optimalna dužina katetera u epiduralnom prostoru: 4 – 6 cm

Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

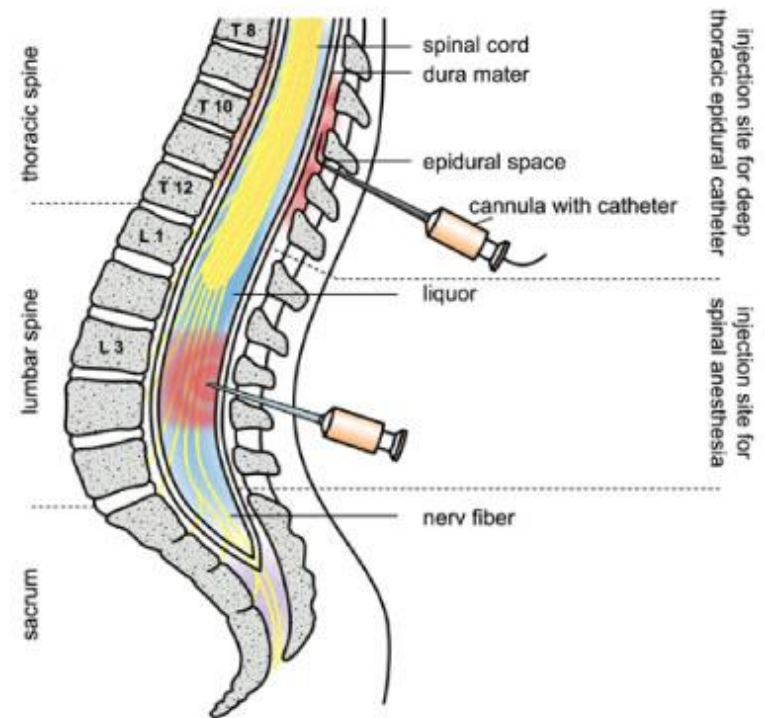
LUMBALNA I TORAKALNA EPIDURALNA ANALGEZIJA

TORAKALNA EPIDURALNA ANALGEZIJA
abdominalne operacije
torakalne operacije

LUMBALNA EPIDURALNA ANALGEZIJA
ortopedske /traumatološke operacije

ginekološki / urološki zahvati u donjem
abdomenu

Figure 1 - Method of CSTEА.



Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

LJEKOVI ZA EPIDURALNU ANALGEZIJU

- LOKALNI ANESTETICI: ropivakain, levobupivakain, bupivakain
- OPIOIDI: morfij, fentanil
- DODATNI LJEKOVI: katapresan

Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

DJELOVANJE EPIDURALNIH LJEKOVA

LOKALNI ANESTETICI blokiraju

- simpatičke živce: bradikardija, vazodilatacija i hipotenzija
- senzoričke živce: blokada osjećaja dodira i temperature
- motoričke živce: mišićna slabost, pareza ili paraliza

OPIOIDI se vežu na opioidne receptore: smanjivaju bol (analgezija),
a potencijalno uzrokuju i nuspojave opioida (svrab.....depresija disanja)

Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

MOGUĆE KOMPLIKACIJE EPIDURALNE ANALGEZIJE:

tehničke zbog epiduralne punkcije i uvođenja katetera:

- GLAVOBOLJA
- BOLOVI U KIČMI
- EPIDURALNI HEMATOM
- EPIDURALNI ABSCES
- OŠTEĆENJE ŽIVACA

zbog lijekova (LA, OPIOIDI):

- SEDACIJA
- DEPRESIJA DISANJA
- HIPOTENZIJA
- MUČNINA, POVRAĆANJE
- SVRAB
- RETENCIJA URINA
- SENZORIČKA / MOTORIČKA BLOKADA

Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

NADZOR PACIJENATA SA EPIDURALNOM ANALGEZIJOM

- Stanje svijesti 1 x na 3h
- Frekvencija, dubina i ritam disanja 1 x 3h
- Krvni tlak stalno na monitoru
- Senzorika / motorika 1 x na turnus
- Diureze: obično imaju SUK
- Nadzor katetera i konekta: mjesto uboda, fiksacija, flasteri, konekt sa bakterijskim filterom i sa pumpom
- Nadzor nad pumpom za davanje lijekova

Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

PROTOKOL ZA TRETMAN NEŽELJENIH EFEKATA I KOMPLIKACIJA TEHNIKA POSTOPERATIVNE ANALGEZIJE

MUČNINA I POVRAĆANJE

1. antiemetik iv
2. ako nakon 30 min nema poboljšanja, smanji protok analgetika (preko PCA) ili zaustavi 2 časa

HIPOTENZIJA

Pad TA preko 25% od polaznog

1. iv infuzija kristaloida 200 mL/5 min
2. simpatikomimetik efedrin hlorid 10 mg iv
3. pri padu TA preko 50% od polaznog pozovi reanimaciju

SVRAB

1. antihistaminik iv
2. epiduralnu analgeziju ne prekidamo, nastavljamo sa analgetskom smešom bez morfina

SEDACIJA

1. stepen 2 – izrazita: pacijent pospan, zenice sužene do 2-3 mm – smanji analgeziju za 50%; ponovna ocena nakon 15 min
2. stepen 3 – pacijent spava, teško ga probudimo, zenice maksimalno sužene – mere kao kod depresije disanja

DEPRESIJA DISANJA

Frekvencija disanja < 8/min, plitko disanje/apnoične pauze, SpO₂<90%

1. zaustavi analgeziju – kontinuiran monitoring
2. aplikacija O₂ 6 L/min preko maske
3. oslobađanje disajnog puta odnosno ventilacija pomoću maske i reanimacionog samoširećeg balona (Ambu)
4. nalokson 1 amp (0,4 mg) razredi do 10 mL, zatim davati po 1 mL do efekta
5. pozovi reanimaciju

2. izdanje klasif. br. ispunjenog formulara: 0162 ND KRG KOAIT 134

POSTUPCI U LEČENJU NEŽELJENIH EFEKATA I KOMPLIKACIJA POSTOPERATIVNE ANALGEZIJE

NEUROLOŠKE KOMPLIKACIJE

SENZORNI POREMEĆAJI/MOTORNA BLOKADA/NEOSETLJIVOST OD TH4 NAGORE

1. zaustavi epiduralnu analgeziju
2. ponovna ocena motorike nakon 2 časa
3. pozovi SLAPB odnosno nadzornog anesteziologa
4. smanji dozu/protok preko PCEA

Slabost donjih ekstremiteta koja se pogoršava
Jak bol u leđima koji se pogoršava

Pozovi anesteziologa na dect 7200 tokom dežurstva 8842 ili multiton 511

SLUŽBA ZA LEČENJE AKUTNOG

POSTOPERATIVNOG BOLA (SLAPB)

anesteziolog dect 7200
medicinske sestre dect 8623, 7243, multiton 775
popodne/dežurstvo:
nadzorni anesteziolog dect 8842
nadzorni anestezičar 8202

Oblikovanje: Ivan Mori - 2015

SISTEMSKA TOKSIČNOST LOKALNIH ANESTETIKA

Neurotoksičnost:

metalni ukus, utrnuo jezik, tinitus, poremećaji vida, toničko-kloničke konvulzije, gubitak svesti

Kardiotoksičnost:

hipertenzija, hipotenzija, tahikardija, bradikardija, poremećaji ritma, akutni zastoj srca

1. prekini aplikaciju lokalnog anestetika
2. pozovi reanimaciju
3. dodatak 100% O₂, oslobađanje disajnog puta odnosno ventilacija pomoću maske i samoširećeg reanimacionog balona (Ambu)
4. tretiraj konvulzije: midazolam, propofol
5. tretiraj poremećaje ritma srca, akutni zastoj srca
6. Intralipid 20% 1,5 mL/kg iv bolus, ponovi bolus nakon 5 min, zatim iv infuzija 0,25-0,5 mL/kg/min u slučaju hipotenzije

univerzitetni
klinički center ljubljana
University Medical Centre Ljubljana



Kliničko odeljenje za anesteziologiju i hirušku intenzivnu terapiju

Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

HIPOTENZIJA

Pacijentov pritisak za $\geq 20\%$ niži od njegovog običnog tlaka,
ili ≤ 90 mmHg

- ISKLJUČITI KRVARENJE!!
- NE ISKLJUČITI EPIDURALNE ANALGEZIJE
- POZOVI LEKARA!
- IV Infuzija kristaloida 500 ml

Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

SENZORIČNO / MOTORIČNA BLOKADA

- TORAKALNA EPIDURALNA ANALGEZIJA:

Pacijent ne oseća dodira na prsnom košu

Malo teže diše: to mu smeta

Pritisak normalan

- LUMBALNA EPIDURALNA BLOKADA:

Hipotenzija

Parestezije u jednoj nozi / u obe noge

Ne može da miče noge

Ne oseti analni sfinkter

- MEDICINSKA SESTRA NA ODELENJU :

ISKLUČI EPIDURALNU INFUZIJU ZA 2H I POZOVE

SESTRU APS, KOJA PROVERI DUBINU EPIDURALNIG KATETERA I

KONCENTRACIJU / DOZU LOKALNOG ANESTETIKA

Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

SENZORIČNO / MOTORIČNA BLOKADA

- **U SLUČAJU SNAŽNIH BOLOVA U KIČMI ODMAH ZVATI LJEČNIKA**
- **AKO BOLOVA NEMA ALI SE BLOKADA NAKON 1H – 2H BEZ EPIDURALNE ANALGEZIJE NE OPORAVLJA: ZVATI LJEČNIKA**

URGENTNA MR KIČME:

U SLUČAJU EPIDURALNOG HEMATOMA:

URGENTNA OPERACIJA I EVAKUACIJA HEMATOMA

Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

EPIDURALNI HEMATOM I APSCES NAJOPASNIJA KOMPLIKACIJA EPIDURALNE ANALGEZIJE

EPIDURALNI HEMATOM

- senzorična / motorična blokada se pogoršava
- obično uz veoma jak bol u predelu kičme gde ulazi epiduralni kateter
- na dan ustavljanja epiduralnog katetera

EPIDURALNI APSCES

- senzorična / motorična blokada se pogoršava
- uz porast telesne temperature
- obično bez bola u kičmi
- 3. do 5. dan nakon uvođenja epiduralnog katetera

URGENTNA MR KIČME, U SLUČAJU EPIDURALNOG HEMATOMA/ ABSCESA URGENTNA OPERACIJA I EVAKUACIJA HEMATOMA / APSCESA

Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

LOKALNI APSCES NA KOŽI PORED EPIDURALNOG KATETERA

- Pacijent nema povišenu temperaturu
- Pacijent nema bolova
- Pacijent nema neuroloških poremećaja

KATETER ODMAH IZVADIMO.

Liječenje spontano.

Ne treba sistemski antibiotik.

Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

PRAVI NAČIN



FIKSACIJA EPIDURALNOG KATETERA SPRIJEDA



S-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

EPIDURALNI KATETER PRAVI NAČIN FIKSACIJE NA LEĐIMA



Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

FIKSACIJA EPIDURALNOG KATETERA KAKO NIJE U REDU



Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

UKLANJANJE EPIDURALNOG KATETERA kod pacijenata na tromboprolaksi sa NMH

Uklanjanje epiduralnog katetera treba planirati u istom smislu kao uvođenje.

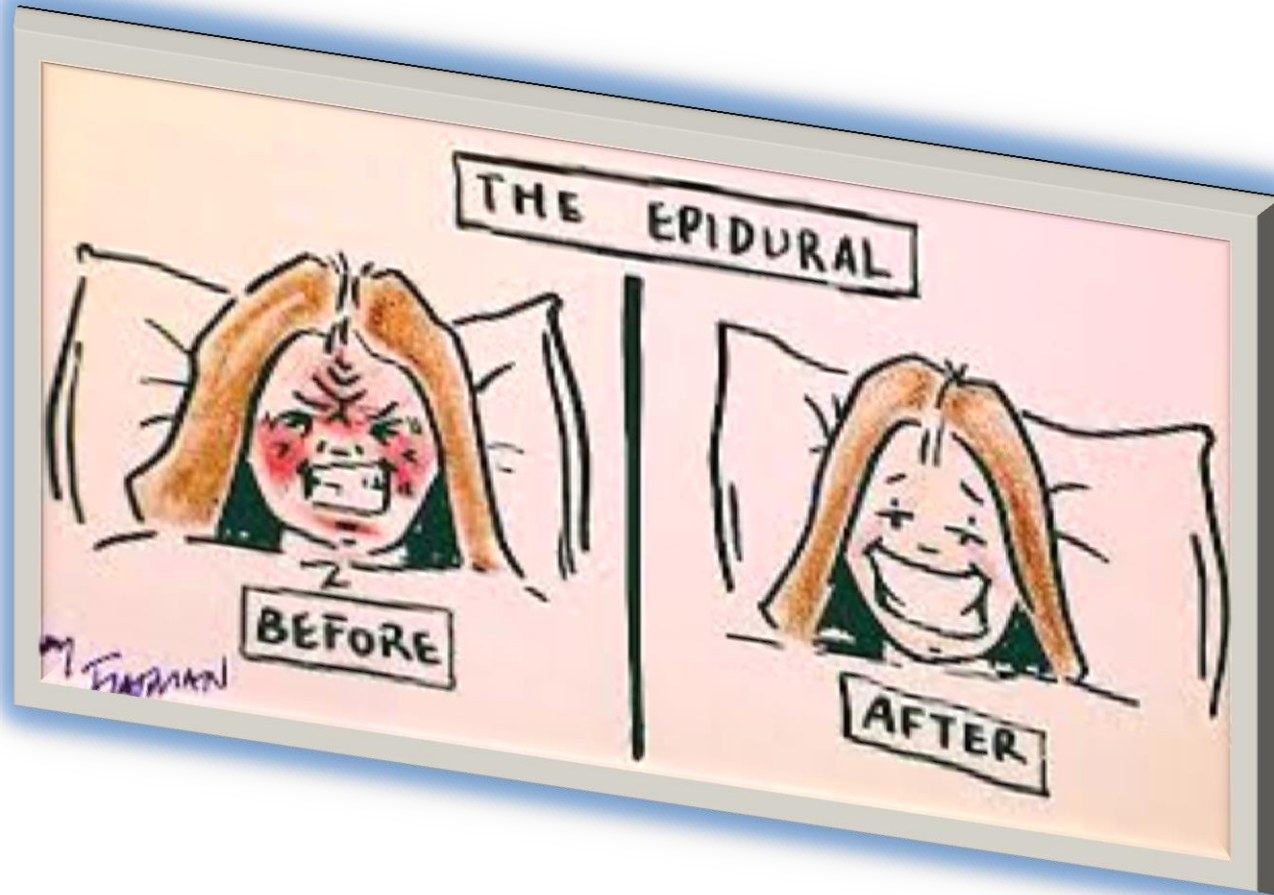
Epiduralni katater može se izvući 10 – 12 h nakon profilaktičke doze NMH,

a sledeća profilaktička doza NMH daje se 6 – 8 h nakon uklanjanja EK

Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)

"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

HVALA NA PAŽNJI



Project number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001)