

I pacienta sa analgezijom putem katetera u rani treba monitorirati u postoperativnom periodu

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Predoperativno stanje

Starost
Prateće bolesti

Anesteziološke metode i tehnike

Intraoperativna optimizacija
Novi lijekovi

**Varna in kakovostna obravnava
bolnikov**

Hirurška tehnika

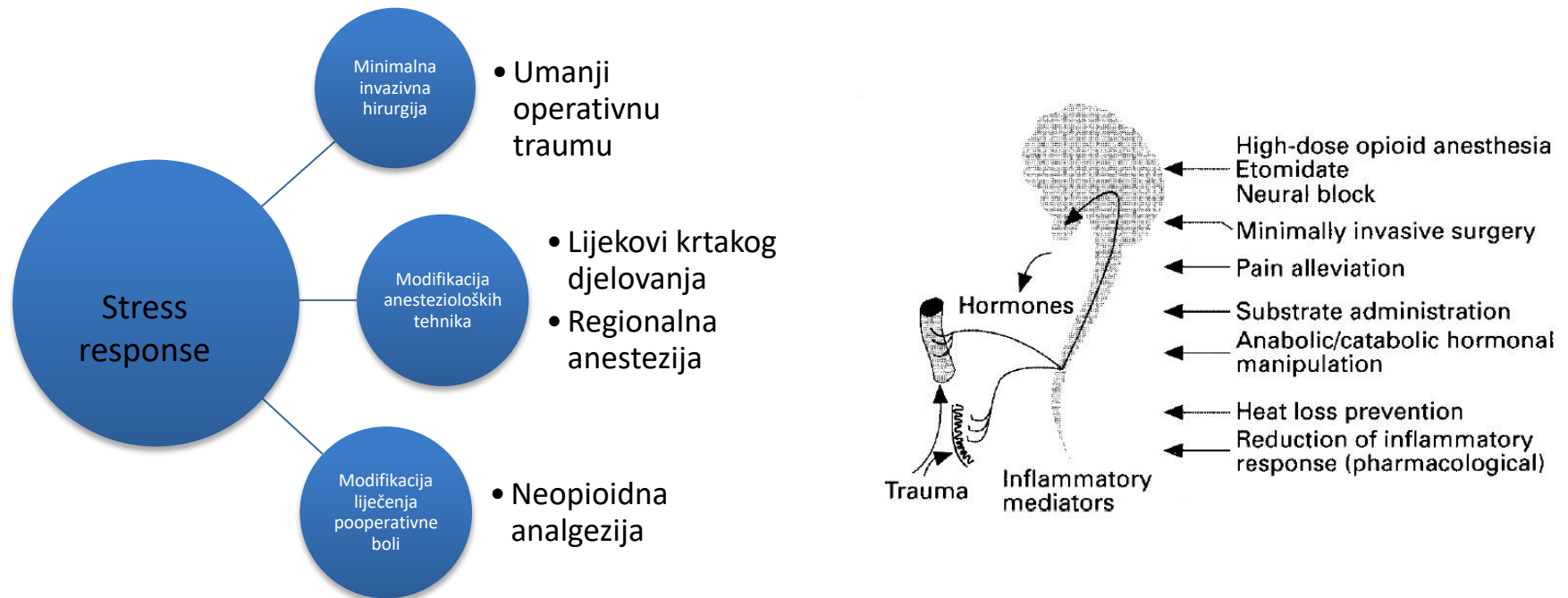
Manje invazivne tehnike
Manje oštećenje tkiva

Pooperativno razdoblje

Ublažavanje pooperativnog bola
Ubrzan oporavak po operaciji

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Odgovor na stres kod operacije



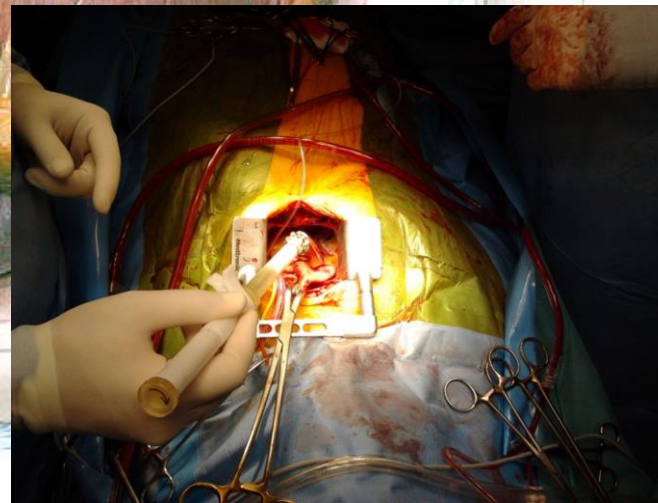
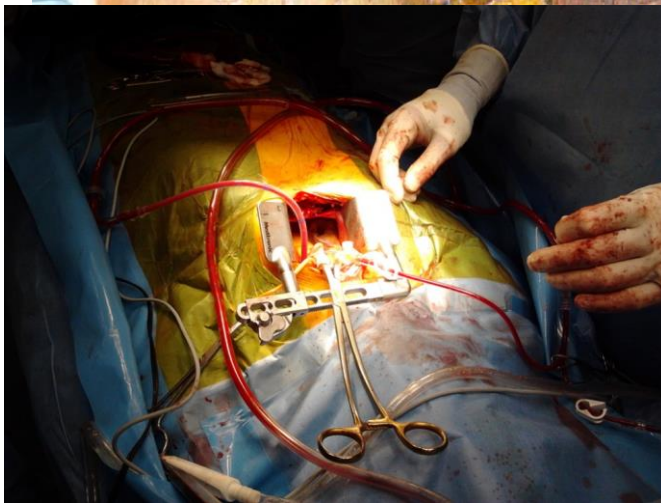
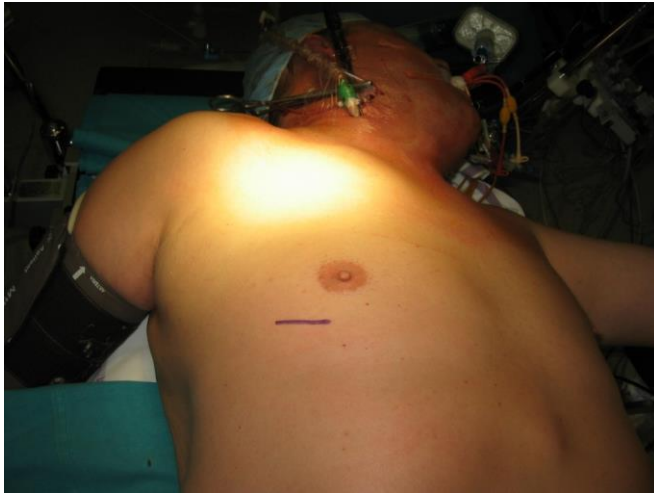
Kehlet, Annals of Surgery, 2008

Matata B. Ann Thorac Surg; 2000

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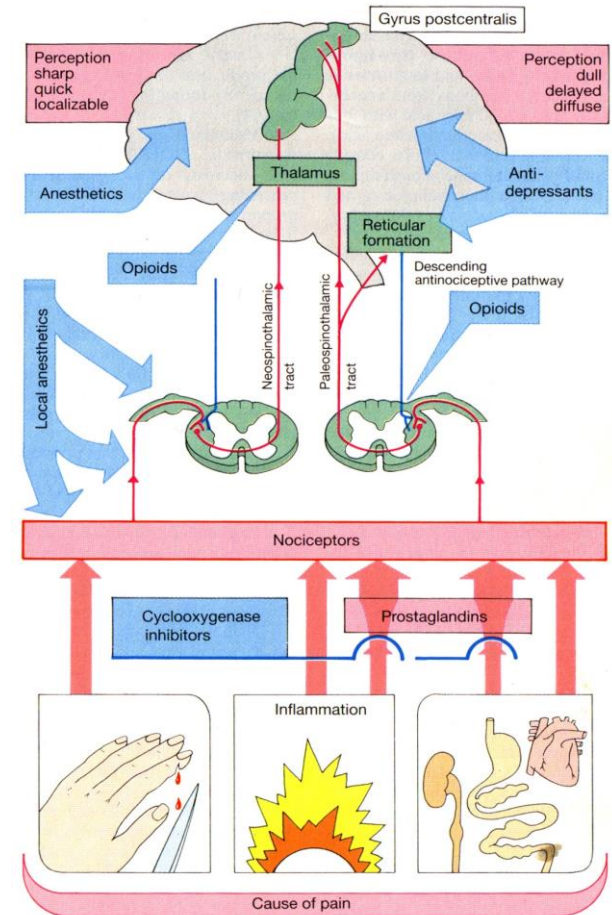
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Multimodalna analgezija

- Kombinacija različitih grupa analgetika
- Različita mjesta aplikacije analgetika
- Smanjenje nepoželjnih djelovanja

Rassmusen 1998
Vintar 2005



Metode multimodalne analgezije

- Intravenska analgezija: opioidni i neopioidni analgetici
- Regionalna analgezija: subarahnoidalna, epiduralna, paravertebralna, periferna blokada živaca
- Katetar u rani
- Kombinacija različnih tehnika i metoda

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Neopioidna analgezija

- Infiltracija hirurške rane s lokalnim anestetikom
- Postavljanje katetera u hiruršku ranu

Sostaric M. The Heart Surg Forum; 2005

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Analgezija preko katetera u rani

- Obezbjedjuje kontinuiranu aplikaciju lokalnog anestetika v područje operativne rane
- Povoljan za abdominalne, torakalne, ortopedske operacije
- Manje invazivni postupci: manja hirurška rana

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Posebnosti katetera u rani

- Dužina ovis od veličine rane
- Bočni otvori na dijelu katetra koji je u rani
- Veličine otvora moraju obezbjedjivati konstantan protok LA
- Oznake na dijelu katetera koji je izvan rane
- Može i epiduralni katetar

Načini aplikacije LA

- Infuzijske pumpe: obezbjedjuju kontinuiran protok in mogućnost davanja bolusnih doza
- Bolusno davanje: opasnost infekcije
- Elastomerske pumpe

Elastomerske pumpe

- Kontinuirano dovodjenje LA u ranu
- Različiti volumeni pumpe
- Trajanje infuzije 12 sati do 5 dana
- Jednostavne za rukovanje
- Bez alarma
- Za jednokratnu upotrebu



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Plasiranje katetera

- U operacionoj sali na kraju operacije
- Pod kontrolom oka ili po šivanju rane s tuneliranjem
- Injicirati tekućinu preko katetera
- Osigurati da su sve rupice u rani
- Fiksirati šavovima i flasterima

Monitorizovanje bolesnika s kateterom u rani

- Nadzor u operacionoj dvorani prilikom davanja katetera
- Pregled mjesta plasiranja katetera i operativne rane u pogledu upalnih procesa
- Prohodnost katetera
- Izpadanje katetera
- Djelotvornost ublaživanja boli: VAS, vitalni znaci
- Nadzor vitalnih funkcija za prepoznavanje toksičnih djelovanja LA: neurotoksičnost, kardiotoksičnost

Opskrba katetera u rani

- Prevezivanje istovremeno s prevezivanjem rane – izvodi medicinska sestra na odjeljenju
- Zamjena antibakterijskog filtera svakih 24 sata kod bolusne aplikacije LA – izvodi medicinska sestra na odjeljenju
- Odstranjivanje katetera ne predstavlja opasnost za krvarenje

Odstranjivanje katetera iz rane

- Postupak jednostavan in nebolan
- Ukoliko je katetar zašiven potrebna je pažljivost kod odstranjivanja šavova; paziti da ne prerežemo katetar
- Ukoliko katetar ne možemo izvući bez upotrebe veće sile postoji opasnost da je katetar obuhvaćen hirurkim šavom - potrebno je pozvati hirurga
- Provjerimo da je odstranjen cijeli katetar
- Poslije odstranjivanja mjesto previjemo kao što previjemo ranu

Infekcija rane

- Odstranimo katetar
- Vrh sterilno odrežemo i pošaljemo na MB analizu
- Uvodjenje antibiotika kod sistemskih znakova upale

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The Heart Surgery Forum #2005-1163
8 (6), 2005 [Epub October 2005]
doi:10.1532/HSF98.20051163

Online address: <http://cardenjennings.metapress.com/>

Incisional Administration of Local Anesthetic Provides Satisfactory Analgesia following Port Access Heart Surgery

Maja Sostaric, MD

Clinical Department of Anesthesiology and Intensive Care, Univesity Medical Center, Ljubljana, Slovenia

Table 1. Type of Procedure*

MVR or PVM	26	47.2%
MVR or PVM+PVT	24	43.8%
ASD	3	5.4%
Tumor removal	2	3.6%

Table 2. Demographic Data and Perioperative Characteristics*

Age, y	61±12.09
Sex, M/F	18/37
ASA	2.8±0.52
Euroscore	5±2.2
CPB time, min	146.7±37
Cross clamp time, min	87.6±24.3

Table 4. Results (Mean ± SD)*

VAS	2.5±1.4
Number of bolus of LA	2.0±1.1
Number of bolus of piritramid	1.5±1.1

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- Po odstranjanju katetera poslati vrh na mikrobiološku analizu
- Negativni nalazi
- Bez komplikacija u pogledu toksičnosti LA
- Omogućava ekstubaciju v operacionoj dvorani

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Mogućnosti za istraživanja i studije

- Djelotvornost LA: doza i koncentracija
- Utjecaj na cijeljenje rane
- Efikasnost kod različitih hirurških poduhvata in različitih hirurških tehnika

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