

DAFTAR PUSTAKA

- Aida S. (2005). The challenge of preemptive analgesia. *Pain:clinical updates (IASP)*, 13(2):1-4.
- Apfelbaum J.L., Chen C., Mehta S.S. & Gan, T.J. (2003). Postoperative pain experience: results from a national survey suggest postoperative pain continues to be undermanaged. *Anesthesia Analgesia*, 97:534-540.
- Beauregard L., Pomp A. & Choiniere M. (1998). Severity and impact of pain after day-surgery. *Canadian Journal of Anesthesia*, 65(4): 304-311.
- Bell R.F., Dahl J.B., Moore R.A. & Kalso E.A. (2006). Perioperative ketamine for acute postoperative pain. *Cochrane Database of Systematic Reviews*, 1. Available from: doi: 10.1002/14651858.CD004603.pub2. [Accessed 8th November 2012].
- Elia N. & Tramer M.R. (2005). Ketamine and postoperative pain—a quantitative systematic review of randomised trials. *Pain*, 113(1-2): 61–70.
- Guillou N., Tanguy M., Seguin P., Branger B., Campion J.P. & Malledant Y. 2003. The effects of small-dose ketamine on morphine consumption in surgical intensive care unit patients after major abdominal surgery. *Anesthesia Analgesia*, 97:843–847.
- Himmelseher S. & Durieux M.E. (2005). Ketamine for perioperative pain management. *Anesthesiology*, 102:211–220.
- Hocking G., Visser E.J. & Schug S.A. (2007). Ketamine:does life begin at 40? *Pain:clinical updates (IASP)*, 15(3):1–6.
- International Association for the Study of Pain. (2012). IASP taxonomy. [Online] Available from: <http://www.iasp-pain.org/Content/NavigationMenu/GeneralResourceLinks/PainDefinitions/default.htm> [Accessed 28th September 2012].
- Katz J. & Clarke K. (2008). Preventive analgesia and beyond: current status, evidence and future directions. In: Macintyre PE, Walher SM and Rowbotham D, J. (eds). *Clinical pain management: acute pain* London, Hodder Arnold.

- Kissin I. (2000). Preemptive analgesia. *Anesthesiology*, 93:1138–1143
- Kwok R.F.K., Lim J., Chan M.T.V., Gin T. & Chiu W.K.Y. (2004). Preoperative ketamine improves postoperative analgesia after gynecologic laparoscopic surgery. *Anesthesia Analgesia*, 98:1044 – 1049
- Laskowski K., Stirling A., McKay W.P., & Lim H.J. (2011). A systematic review of intravenous ketamine for postoperative analgesia. *Canadian Journal of Anesthesia*; 58:911–923.
- Lubenow T.R., Ivankovich A.D. & Barkin R.L. (2006). Management of acute postoperative pain. In: Barash, P.G., Cullen, B.F. & Stoelting, R.K. (eds.) *Clinical anesthesia*. 5th ed. Philadelphia: Lippincott Williams & Wilkins.
- Macintyre P.E., Schug S.A., Scott D.A., Visser E.J. & Walker S.M. (2010).. *Acute pain management: scientific evidence*. 3rd ed. Melbourne, Australian and New Zealand College of Anaesthetists and Faculty of Pain Medicine.
- Macintyre P.E. & Coldrey J. 2009. Intravenous patient-controlled analgesia. In: Sinatra, R.S., de Leon-Casasola, O.A., Ginsberg, B. & Viscusi, E.R. (eds.) *Acute Pain Management*. 1st ed. New York: Cambridge University Press.
- Menigaux C., Fletcher D., Dupont X., Guignard B., Guirimand F. & Chauvin M. (2000). The benefits of intraoperative small-dose ketamine on postoperative pain after anterior cruciate ligament repair. *Anesthesia Analgesia*, 90:129–135.
- Møiniche S., Kehlet H. & Dahl J.B. (2002). A qualitative and quantitative systematic review of preemptive analgesia for postoperative pain relief—the role of timing of analgesia. *Anesthesiology*, 96:725–741.
- Morgan, G.E., Mikhail, M.S. & Murray, M.J. (2006a). Adjuncts to anesthesia. *Clinical anesthesiology*. 4th ed. New York: Lange Medical Books/McGraw-Hill Companies.
- Morgan G.E., Mikhail M.S. & Murray M.J. (2006b). Local anesthetic. *Clinical anesthesiology*. 4th ed. New York: Lange Medical Books/McGraw-Hill Companies.
- Morgan G.E., Mikhail M.S. & Murray M.J. (2006c). Nonvolatile anesthetic agents. *Clinical anesthesiology*. 4th ed. New York: Lange Medical Books/McGraw-Hill Companies.

- Morgan G.E., Mikhail M.S. & Murray M.J. (2006d). Pain management. *Clinical anesthesiology*. 4th ed. New York: Lange Medical Books/McGraw-Hill Companies.
- Morgan G.E., Mikhail M.S. & Murray M.J. (2006e). Spinal, epidural, & caudal blocks. *Clinical anesthesiology*. 4th ed. New York: Lange Medical Books/McGraw-Hill Companies.
- Ong C.K., Lirk P., Seymour R.A. & Jenkins B.J. (2005). The efficacy of preemptive analgesia for acute postoperative pain management: a meta-analysis. *Anesthesia Analgesia*, 100(3):757–773.
- Sastroasmoro S. & Ismael S. (2008). Perkiraan besar sampel. *Dasar-dasar metodologi penelitian klinis*. Edisi ke-3. Jakarta:CV Sagung Seto.
- Sommer M., de Rijke J.M., van Kleef M., Kessels A.G.H., Peters M.L., Geurts J.W., et al. (2008). The prevalence of postoperative pain in a sample of 1490 surgical inpatients. *European Journal of Anaesthesiology* (abstract) [Online]. 25(4):267-274. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/18053314> [Accessed 28th September 2012].
- Stoelting R.K. & Hillier S.C. (2006a). Cyclooxygenase-2 inhibitors and nonspecific nonsteroidal antiinflammatory drugs. *Pharmacology and physiology in anesthetic practice*. 4th ed. Philadelphia: Lippincott Williams & Wilkins.
- Stoelting R.K. & Hillier S.C. (2006b). Local anesthetics. *Pharmacology and physiology in anesthetic practice*. 4th ed. Philadelphia: Lippincott Williams & Wilkins.
- Stoelting R.K. & Hillier S.C. (2006c). Nonbarbiturate intravenous anesthetic drugs. *Pharmacology and physiology in anesthetic practice*. 4th ed. Philadelphia: Lippincott Williams & Wilkins.
- Stoelting R.K. & Hillier S.C. (2006d). Opioid agonists and antagonists. *Pharmacology and physiology in anesthetic practice*. 4th ed. Philadelphia: Lippincott Williams & Wilkins.
- Stoelting R.K. & Hillier S.C. (2006e). Pain. *Pharmacology and physiology in anesthetic practice*. 4th ed. Philadelphia: Lippincott Williams & Wilkins.

- Subramaniam K., Subramaniam B. & Steinbrook R.A. (2004). Ketamine as adjuvant analgesic to opioids: a quantitative and qualitative systematic review. *Anesthesia Analgesia*, 99:482–495.
- Transverse sections of the spinal cord. [Online] Available from: <http://www.us.elsevierhealth.com/media/us/samplechapters/9780323045735/9780323045735.pdf> [Accessed 28th October 2012].
- Vadivelu N., Whitney C.J. & Sinatra R.S. (2009). Pain pathways and acute pain processing. *In*: Sinatra R.S., de Leon-Casasola O.A., Ginsberg, B. & Viscusi, E.R. (eds.) *Acute pain management*. 1st ed. New York: Cambridge University Press.
- Visser E. & Schug S.A. (2006). The role of ketamine in pain management. *Biomedicine & Pharmacotherapy* (abstract) [Online], 60(7):341-348. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/16854557> [Accessed 10th November 2012]
- Woolf C.J. & Salter M.W. 2000. Neuronal plasticity: increasing the gain in pain. *Science*, 288:1765–1769
- Yamauchi M., Asano M., Watanabe, M., Iwasaki, S., Furuse, S. & Namiki, A. (2008). Continuous low-dose ketamine improves the analgesic effects of fentanyl patient-controlled analgesia after cervical spine surgery. *Anesthesia Analgesia*, 107(3):1041–1044.

LAMPIRAN-LAMPIRAN

Lampiran 1. Pernyataan persetujuan pasien

PERSETUJUAN SETELAH PENJELASAN

PERBANDINGAN EFEK PEMBERIAN KETAMIN 0,15 mg/kgBB IV PRAINSISI DAN KETAMIN 0,15 mg/kgBB IV PASCABEDAH TERHADAP KEBUTUHAN ANALGESIK MORFIN PASCABEDAH PADA PASIEN OPERASI ORTOPEDI EKSTREMITAS BAWAH

Yang bertandatangan dibawah ini :

Nama/Umur :
A l a m a t :
No. Rekam Medis :

Menyatakan dengan sesungguhnya bahwa saya telah mendapatkan penjelasan dan kesempatan bertanya hal-hal yang belum saya mengerti tentang penelitian ini. Penjelasan tersebut meliputi manfaat dan keuntungan serta efek samping dari pemberian ketamin 0,15 mg/kgBB sebelum/setelah operasi + infus ketamin 0,1 mg/kgBB/IV selama 24 jam pascabedah dan morfin dengan dosis awal 2 mg dan dosis bolus 1 mg melalui alat *patient-controlled analgesia* (PCA) yang akan diberikan pada saya selama penelitian ini.

Setelah mendapat penjelasan tersebut, dengan ini saya menyatakan secara sukarela ikut serta dalam penelitian ini dan saya berhak mengundurkan diri bila ada alasan sehubungan dengan kesehatan saya. Demikian pula jika terjadi ketidaksesuaian, saya akan menelaah kembali untuk mencari jalan keluar yang terbaik tentang ketidaksesuaian tersebut.

Demikian pernyataan ini saya buat dengan sebenarnya, dengan penuh kesadaran dan tanpa paksaan.

Makassar, 2013

Saksi,

Tanda Tangan

Yang Menyatakan,

1.

2. (.....)

Penanggung Jawab Medik,
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Lampiran 2. Lembar pengumpulan data/pengamatan

LEMBAR PENGUMPULAN DATA

PERBANDINGAN EFEK PEMBERIAN KETAMIN 0,15 mg/kgBB IV PRAINSISI DAN KETAMIN 0,15 mg/kgBB IV PASCABEDAH TERHADAP KEBUTUHAN ANALGESIK MORFIN PASCABEDAH PADA PASIEN OPERASI ORTOPEDI EKSTREMITAS BAWAH

I. Identitas

Nama/Umur : (Inisial)/tahun

Jenis Kelamin : L/P

BB/TB : kg/.....cm. BMI :..... kg/m²

Diagnosis :

Rencana operasi:

II. Anamnesis

.....

Riwayat asma : ada/tidak ada Riwayat adiksi alkohol : ada/tidak ada

Riwayat adiksi narkotik : ada/tidak ada

Riwayat konsumsi analgesik dalam 5 hari terakhir : ada/tidak ada

III. Pemeriksaan Fisis

Tanda Vital :

Tekanan Darah : mmHg Pernapasan :x/mnt

Denyut Nadi :x/mnt Suhu :⁰C VAS :

Kepala :

Leher :

Thoraks :

Abdomen :

Ekstremitas :

IV. Pemeriksaan Penunjang

Laboratorium :

- Darah rutin : Hb Het Lekosit PLT

- Kimia darah: GOT GPT UreumKreatinin..... GDS

- Koagulasi : CT BT PT aPTT

Pemeriksaan penunjang lainnya :

- Foto Thorax
- EKG
-

V. Diagnosis

.....

VI. Kesimpulan

Pasien ASA PS

Lanjutan Lampiran 2

Lembar Pengamatan**Data Pribadi Pasien**

Nama pasien : BB : kg BMI:kg/m²
Umur : thn TB : cm
Jenis Kelamin : L/P
Alamat :
No.Sampel :
No Rekam Medis : RS :

Data Klinis

1. Diagnosis MRS :
2. ASA PS :
3. Mulai Anestesi :
4. Mulai Operasi :
5. Selesai Operasi :
6. Lama Operasi : jam menit

Lembar Pengamatan

Ketinggian blok : Th/L/S

Dosis ketamin :

Bolus : 0,15 mg/kg x kg =mg

Kontinyu : 0,1 mg/kg/jam x kg = mg/jam

Bolus Ketamin/NaCl 0,9% * prainsisi pada jam : :

Bolus Ketamin/NaCl 0,9% * pascabedah pada jam : :

	T0	T1	T2	T1P	T12P	T24P
TDS (mmHg)						
TDD (mmHg)						
TAR (mmHg)						
LJ/LN (x/menit)						
PONV (0/1)						
Delirium (0/1)						

TDS : Tekanan Darah Sistolik

TDP : Tekanan Darah Diastolik

TAR : Tekanan Arteri Rerata (MAP)

LJ : Laju Jantung

0 = tidak ada; 1 = ada

Selesai operasi jam : :

Pemberian pertama morfin pascabedah jam : :

Jangka waktu pemberian pertama morfin : menit

Konsumsi morfin dalam 24 jam pascabedah :mg = mg/kg

Keterangan :

T0 : Pada saat masuk kamar operasi (basal)

T1 : Sebelum insisi kulit (1 menit setelah bolus ketamin 0,15 mg/kg / NaCl 0,9% prainsisi)

T2 : Setelah operasi selesai (1 menit setelah bolus ketamin 0,15 mg/kg / NaCl 0,9% pascabedah)

T1P : 1 jam pascabedah

T12P: 12 jam pascabedah

T24P: 24 jam pascabedah

* coret yang tidak perlu

