

BCCA Protocol Summary for Extreme Pain Therapy Using Parenteral Lidocaine

Protocol Code

SCPAINLI

Tumour Group

Supportive Care – Pain and Symptoms Control

Contact Physician

VC - Dr Pippa Hawley

CSI - Dr Gillian Fyles

ELIGIBILITY

- Patients with diagnosis of severe pain syndrome unresponsive, completely or incompletely, to standard therapy including adjuvant therapies.
- Patients with particularly severe neuropathic pain requiring acute therapy to diminish pain with the understanding that other less invasive medications will be administered to provide ongoing pain relief.

EXCLUSIONS

- Prior allergy to local anaesthetics
- Liver failure (Bilirubin **greater than or equal to** 25 micromol/L)
- Severe cardiac failure or heart block
- Uncontrolled seizures
- Hypertension (BP **greater than** 160 mm Hg systolic)
- Hypokalemia

TESTS

- For first treatment: if patient is male over 65 yrs/female over 55 yrs and/or known or suspected of having cardiac problems, EKG must be done within 14 days of procedure
- During each treatment: blood pressure and heart rate and pain level every 10 minutes during infusion plus every 15 minutes x 2 post end of infusion
- If clinically indicated: Repeat EKG, serum potassium, liver function tests, bilirubin

PREMEDICATIONS

- None

TREATMENT

Drug	Dose	BCCA Administration Guideline
Lidocaine	First dose: 5 mg/kg	IV in 250 ml** NS or D5W over 60 to 120 min

Drug	Dose	BCCA Administration Guideline
Lidocaine	Subsequent doses*: 5 - 10 mg/kg	IV in 250 ml** NS or D5W over 60 to 120 min

* Subsequent doses will be determined by clinical effect and evidence of toxicity

**Final concentration should be 1 to 4 mg/ml

- Repeat as per patient's need (up to 30 days). Discontinue if no response or if allergic reaction to lidocaine.

DOSE MODIFICATIONS

1. **Hematological:** None
2. **Renal dysfunction:** Titrate to effect and toxicity.
3. **Hepatic dysfunction:** Use with caution and titrate to effect and toxicity.

PRECAUTIONS

1. **CNS Effects:** Reactions from lidocaine usually involve CNS effects, and are dose related. They include drowsiness, dizziness, hallucinations, confusion, dissociation, headaches, visual and auditory disturbances, muscle twitches, numbness around mouth, metallic taste, nausea, vomiting, dyspnea. When they occur, stop the infusion and contact physician. Infusion may be restarted at lower rate after resolution of symptoms as per physician's orders.
Unrest, tremor and facial twitching are warning signs of impending generalized convulsions.
Perspiration, dyspnea, and short intervals of apnea are warning signs of impending respiratory arrest.
2. **Cardiovascular Effects:** Reactions are rare with lidocaine and are usually related to high serum levels of lidocaine; they may be the first manifestations of toxicity. If blood pressure changes over 3 readings, stop the infusion and contact physician. Infusion may be restarted at lower rate after resolution of symptoms, as per physician's orders.

Call Dr. Pippa Hawley (pager 05081) at (604) 877-6000 or 1-800-663-3333 with any problems or questions regarding this treatment program.

Date activated: 01 September 2003

Date revised: 01 May 2009 (unsafe abbreviations and symbols replaced)

References:

1. Hawley, P. Intravenous lidocaine for chronic pain (unpublished article).
2. Antiarrhythmic Agents – Lidocaine. In: AHFS 2003 Drug Information. McEvoy GK, editor. Bethesda (MD): American Society of Health-System Pharmacists, Inc.; 2003, pp. 1547-51.
3. Bartlett EE, Hutaserani O. Xylocaine for the relief of postoperative pain. *Anesth Analg* 1961;40:296-304.
4. Mao J, Chen LL. Systemic lidocaine for neuropathic pain relief. *Pain* 2000;87:7-17.
5. Ferrini R. Parenteral lidocaine for severe intractable pain in six hospice patients continued at home. *J Palliative Med* 2000;3(2):193-200.
6. Thomas J et al. Intravenous Lidocaine Relieves Severe Pain: Results of an Inpatient Hospice Chart Review. *J Palliative Med* 2004; 7(5): 660-667
7. Ferrini R et al. How to Initiate and Monitor Infusional Lidocaine for Severe and/or Neuropathic Pain. *J Supportive Oncology* 2004; 2: 90-94
8. Tremonts-Lukats, I et al. Systemic Administration of Local Anesthetics to Relieve Neuropathic Pain: A Systematic Review and Meta-Analysis. *Anesth Analg* 2005; 101:1738-1749