

Algorithm for Chronic Neuropathy

September 1999

Modified March 2000

Modified October 2013

Mode of Action and members of the class (not exhaustive)

1) NMDA-Ca Channel Blocker

Ketamine 5-10% in Lipoderm[®], 10-30mg PO or PR tid regularly + up to q2h prn

Nasal soln 10-50mg/ml-1-2 sprays prn

Orphenadrine 10% in Lipoderm[®] or 100mg PO tid

Dextromethorphan 10% in Lipoderm[®] or <400mg/day PO

Amantadine 200mg/250-500cc IV over 3 hours once (repeat x1 prn).

Lipoderm[®] 10 to 20% tid

2) AMPA-Na Channel Blocker

Anticonvulsant - * Gabapentin 6-10% in Lipoderm[®] tid + up to q2h prn

or up to 2-3Gm/day PO

*Probably blocks glutamate at the NMDA also

Carbamazepine 10% in Lipoderm[®] tid + up to

q2h prn

or 100mg-200mg PO bid/tid (Max 800mg/day)

Antiarrhythmic - Lidocaine 5-10% in Lipoderm[®] tid + up to q2h prn

Mexilitine 2% in Lipoderm[®] tid + up to q2h prn

3) Alpha II-agonist

Clonidine 0.2% in Lipoderm[®] tid + up to q2h prn

4) Substance P blocker

MU agonists (MS, Hydrocodone, Oxycodone, etc) (low dose) PO or

Lipoderm[®]

Mu Agonist also: Loperamide 7% and up Lipoderm[®]

5) GABA_b Agonist

Baclofen 2% Lipoderm[®] tid + up to q2h prn

Non specific GABA agonist - Klonopin 0.5mg-1mg SubL. qhs

6) Tricyclic Antidepressant

Desipramine 2-10% in Lipoderm[®] tid + up to
q2h prn or 25-100mg PO qHS

Amitriptyline 2-10% in Lipoderm[®] tid + up to
q2h prn or 25-150mg PO qHS

Magnesium: Intracellular Resident NMDA Ca Channel Blocker

For Fibromyalgia - Mg/Malic Acid 25/250 mg PO tid
Or 500mg Lipoderm[®] tid

For Diabetic Neuropathy - Lipoic Acid 100mg-300mg PO tid
Bioflavonoids/citrus 500 to 2000 mg PO tid
Gotu Kola 30 to 60 mg PO tid
Nifedipine 2 to 5% Lipoderm[®] tid
Or up to 16% for small areas, i.e., toes

Alpha-antagonist (I & II)

Phentolamine 80mg over 24 hours slow IV one time only!
(for organic neuropathy, i.e., pancreatic cancer).

Notes:

1. Ketamine 10%, Gabapentin 6%, Clonidine 0.2% is standard starting regimen.
2. Add Baclofen 2%, Amitriptyline 2%, Nifedipine, Opioid, Mg as needed. (I.e., use Baclofen specifically in FM patients but also in others and use Amitriptyline in CRPS Type I patients but also in others.)
3. In allodynic Post Herpetic Neuralgia use Ketamine 10% + Bupivacaine 0.5% in a Normal Saline spray to the area, wait 5 to 10 minutes and apply the Lipoderm[®] gel chosen. This spray also has been reported to ease burn pain.
4. Evidence exists for presence of NMDA receptors in the dermal-epidermal junction. AMPA receptors always lie close to NMDA receptors.
5. Evidence exists for the presence of Gabapentin receptors in the periphery.
6. Evidence exists for the presence of adrenergic receptors in the periphery.
7. Evidence exists for the presence of opioid receptors in the periphery.

References:

1. Jones M. Chronic Neuropathic Pain: Pharmacological Interventions in the New Millennium – A Theory of Efficacy. *International Journal of Pharmaceutical Compounding*. Jan/Feb 2000; 4(1): 6-15.
2. Jones M. Clinical Nuggets and Pearls: Chronic Neuropathic Pain and Opioid Tolerance. *International Journal of Pharmaceutical Compounding*. Jan/Feb 2002; 6(1): 4-6.