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What measures relieve postherpetic neuralgia?

Evidence-based answer

Tricyclic antidepressants, gabapentin, and pregabalin effectively reduce pain (strength of recommendation [SOR]: **A**, at least 2 good-quality randomized controlled trials [RCTs] and/or meta-analyses). Opioids have

demonstrated pain relief in 3 RCTs (SOR: **A**, consistent RCTs). Capsaicin and the lidocaine 5% patch relieve pain and decrease allodynia (SOR: **B**, recommendations from meta-analyses and lower-quality RCTs).

Evidence summary

Postherpetic neuralgia (PHN) is defined as pain lasting 1 to 3 months after resolution of acute herpes zoster (shingles) rash. It occurs in approximately 10% to 15% of patients and can cause significant morbidity.

Tricyclic antidepressants provide effective pain relief

Five systematic reviews have concluded that tricyclic antidepressants (TCAs) are effective treatments for PHN.¹⁻⁵ Amitriptyline, the best studied TCA, provides at least moderate pain relief in two-thirds of patients with a pooled number needed to treat (NNT) for TCAs of 2.64 (95% confidence interval [CI], 2.1-3.54)⁵ (**TABLE**).

Selective serotonin reuptake inhibitors—including fluoxetine, paroxetine, citalopram, and sertraline—have been studied in a variety of neuropathic pain syndromes, but not for treating PHN.¹

Anticonvulsants help, too

Five systematic reviews found gabapentin to be effective, with a range of NNT from

2.8 to 5.3 for as much as 50% pain reduction based on the visual analog score (VAS).²⁻⁶ Pregabalin is also effective, with an NNT of 4.93 (95% CI, 3.34-6.07) for up to 50% pain reduction.^{7,8} Limited data are available concerning the effectiveness of valproate.⁵

A look at the role of narcotics

Four systematic reviews found that controlled-release oxycodone reduced pain by 50%, based on the VAS.²⁻⁵ Another systematic review reported only limited evidence of effectiveness.⁶ In pooled results from systematic reviews, opioids decreased pain by 50% on the VAS (NNT=2.67; 95% CI, 2.10-3.77).⁶

An RCT of 76 patients demonstrated that morphine, with methadone as backup, both reduced the intensity of pain and relieved pain more than placebo.⁹

Tramadol, a selective opioid agonist, showed moderate effectiveness in a small RCT (N=125), with an NNT of 4.76 (95% CI, 2.61-26.97).^{3,5,6} The mean pain intensity, degree of pain relief, and amount of rescue medication required

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Tricyclic antidepressants, anticonvulsants, and narcotics all reduce postherpetic pain.

TABLE

What's the NNT for drugs used to treat postherpetic neuralgia?

CLASS	DRUG	DOSE	NNT	SIDE EFFECTS
Tricyclic antidepressants ⁵	Amitriptyline	Up to 150 mg/d (mean 120 mg/d)	2.64	Sedation, dry mouth, blurred vision, constipation, urinary retention
	Nortriptyline	Up to 150 mg/d (mean 89 mg/d)		
	Desipramine	Up to 150 mg/d (mean 65-73 mg/d)		
Anticonvulsants ^{3,5}	Gabapentin	1800-3600 mg/d	2.8-5.3	Somnolence, dizziness, edema, dry mouth
	Pregabalin	150-600 mg/d	4.93	
Opioids ⁵	Oxycodone	Variable	2.67	Constipation, nausea, vomiting, sedation, dizziness, dependence
	Long-acting morphine/methadone	15-225 mg/d (morphine) (mean 91 mg/d for morphine, 15 mg/d for methadone)	2.67	
	Tramadol	100-400 mg/d (mean 275 mg/d)	4.76	Dependence
Topicals ⁵	Capsaicin 0.075% cream	Applied 3-4 times per day	3.26	Burning skin
	Lidocaine 5% extended release patch	Max 3 patches per day	2.0	Mild skin reaction

NNT, number needed to treat.

were all better in the tramadol group than the placebo group.

Evidence for topical therapy is limited

The anesthetic lidocaine patch 5% has shown efficacy in PHN with allodynia based on 3 RCTs of lower quality (short duration, recruitment of patients who had improved on lidocaine previously, no report of baseline levels of pain); the NNT was 2 (95% CI, 1.4-3.3).¹⁰ A systematic review of these 3 RCTs concluded that evidence is insufficient to recommend the lidocaine patch as treatment for PHN.¹⁰

Capsaicin, a topical counterirritant, reduced pain in fewer than 20% of patients in 2 RCTs reported in systematic reviews, with an NNT of 3.26 (95% CI, 2.26-5.85).²⁻⁶ Blinding was limited in these studies because of the stinging associated with treatment.

Recommendations

A 2004 practice parameter of the American Academy of Neurology recommends TCAs (amitriptyline, nortriptyline, desipramine, and maprotiline), gabapentin, pregabalin, opioids, topical lidocaine, and capsaicin to treat PHN (level of evidence: A), but notes that amitriptyline has significant cardiac effects in the elderly compared with nortriptyline and desipramine.³

In 2006, the European Federation of Neurological Societies determined that TCAs, gabapentin, pregabalin, and opioids had established efficacy (level of evidence: A), but recommended opioids as second-line therapy because of potential adverse events with long-term use.⁴ The federation's guidelines designate capsaicin, tramadol, topical lidocaine, and valproate as drugs with lower efficacy or limited strength of evidence (level of evi-

dence: **B**). Nevertheless, they recommend considering topical lidocaine for elderly patients with allodynia and small areas of pain.⁴ ■

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Both topical lidocaine and capsaicin have less evidence of efficacy as treatment for PHN.