What is the Best Treatment for Postinfluenza Pneumonia?

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What is the best treatment for the pain of acute herpes zoster?

Evidence-Based Answer

Valacyclovir is more effective for the acute pain of herpes zoster than acyclovir. Oxycodone provides additional acute pain relief for patients taking antiviral medication, but is associated with substantial adverse effects. Gabapentin is ineffective in managing acute herpes zoster. (SOR B, based on individual RCTs.)

A 1998 meta-analysis of 3 RCTs included 1,076 patients with acute herpes zoster (mean ages ranging from 52 to 68 years) who were randomized to acyclovir 800 mg 5 times daily for 7 days versus placebo. In each study, at least 60% of patients were treated within 48 hours of onset of symptoms. Subgroup analysis was done comparing patients who began treatment within 48 hours with patients whose treatment began between 48 and 72 hours.

Acyclovir led to complete resolution of pain sooner than placebo with either early or late onset of therapy (28 vs 62 days if initiated within 48 hours, \( P<.005 \); 28 vs 58 days if initiated between 48 and 72 hours, \( P=.04 \)).

In 1995, a single multicenter RCT involving 1,141 patients with acute herpes zoster (mean age 68 years) compared acyclovir with valacyclovir. Valacyclovir (dosed at 1,000 mg TID for 7 days) led to complete pain resolution sooner than acyclovir (dosed at 800 mg 5 times daily for 7 days). If started within 48 hours, the mean time to pain resolution was 44 days with valacyclovir and 51 days with acyclovir (\( P=.03 \)). If started between 48 and 72 hours, the mean time to pain resolution was 36 days with valacyclovir and 48 days with acyclovir (\( P=.02 \)).

In 2009, a single RCT of 87 patients with acute herpes (mean age 66 years) compared CR-oxycodone at a dose titrated to 60 mg BID, gabapentin at a dose titrated to 600 mg TID, and placebo. All patients also received famcyclovir 500 mg TID for 7 days.

The oxycodone group had significantly more patients with a ≤30% reduction in pain compared with placebo in the first 2 weeks (79% vs 45%, respectively; \( P=.02 \); NNT=2.9). Significantly more patients taking oxycodone discontinued treatment because of adverse effects compared with placebo (27.6% vs 6.9%, \( P=.02 \)), the most common being constipation, dizziness, and disorientation. No significant difference was noted in pain control between the gabapentin and placebo groups.\(^3\)

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What is the best treatment for postinfluenza pneumonia?

Evidence-Based Answer

Cefotaxime, ceftriaxone, and respiratory fluoroquinolones are recommended for influenza-associated pneumonia. Oseltamivir and zanamivir can be used to reduce viral shedding in hospitalized patients with influenza, with or without pneumonia. (SOR C, based on consensus guidelines.) Early treatment of the influenza infection with oseltamivir or inhaled zanamivir is recommended for prevention of postinfluenza pneumonia. (SOR A, based on a meta-analysis.)

The Infectious Disease Society of America and the American Thoracic Society produced a set of guidelines for the treatment of community-acquired pneumonia in 2007.\(^1\) Committee members were assigned topics and received input from the Mycobacterium Tuberculosis and Pulmonary Infection Assembly, as well as the Clinical Pulmonary and Critical Care assemblies. These topics were presented and revised, based on existing available medical literature, by committee members until consensus among the members were reached on each topic. The recommendations were reviewed by each organization independently.

They determined that influenza-associated pneumonia is commonly caused by Streptococcus pneumoniae, Staphylococcus aureus, Haemophilus influenzae, and group A streptococci, whereas Legionella, Chlamydophila, and Mycoplasma are not important causes. They recommended cefotaxime, ceftriaxone, and respiratory fluoroquinolones for

What is the best prophylactic treatment for chronic tension headaches?

Evidence-Based Answer

For prophylaxis of chronic tension-type headache, the tetracyclic antidepressant mirtazapine is more effective than amitriptyline and has fewer adverse effects. (SOR B, based on small, but consistent RCTs.) Selective serotonin reuptake inhibitors (SSRIs) are less effective than tricyclic antidepressants (TCAs). (SOR A, based on a meta-analysis.)

In a randomized, double-blind, placebo-controlled, crossover study published in 2004, 24 adults with chronic tension-type headaches (diagnosed using the International Headache Society criteria) were randomly assigned to receive either mirtazapine 15 to 30 mg per day or placebo for 8 weeks, with a 2-week washout period. The primary efficacy variable was the area-under-the-headache curve (AUC; total headache duration x intensity).

The AUC was 34% lower during treatment with mirtazapine (843) than during treatment with placebo (1,275) (P=.01). Mirtazapine also reduced the secondary efficacy variables: Headache frequency was decreased from 28 to 25.5 days over a 4-week period (P=.005); headache duration was decreased from 288 to 210 hours over a 4-week period (P=.03); and the average intensity of headaches decreased minimally from 4.3 to 4.2 on a 10-point verbal rating scale (P=.03). No significant difference was noted in frequency of side effects between active and placebo, but an increased occurrence of well-known adverse effects was reported in the active group, including drowsiness, dizziness, and weight gain.

In another RCT published in 2003, 60 adults with chronic tension-type headaches were randomly assigned to receive 25 mg amitriptyline or 30 mg mirtazapine daily for 6 months. Headache severity and frequency were measured using the score units measure (SUM), expressed as 0 to 10 headache units.

Both treatments significantly reduced headache severity and frequency from baseline; amitriptyline SUM score decreased 58% (from 4.9 to 2.1; P<.001) and mirtazapine SUM score decreased 65% (from 4.5 to 1.6; P<.001). However, no significant difference was noted between treatment groups. Use of analgesics was significantly decreased in both groups after prophylaxis (daily average of 2.5 doses per day decreased to 0.5; daily average of 0.5 doses per day decreased to 0.2).

treatment of this condition. Agents active against methicillin-resistant S. aureus, such as vancomycin or linezolid, should be reserved for confirmed cases. Oseltamivir or zanamivir can be used to reduce viral shedding in hospitalized patients or for treatment of influenza pneumonia. They also recommended treating influenza patients with oseltamivir or zanamivir within 48 hours of onset of symptoms.3

A 2003 meta-analysis of double-blind randomized studies compared the efficacy of oseltamivir with a placebo in 2,413 patients with confirmed influenza. Patients who received oseltamivir developed pneumonia less often than patients who received placebo alone. Nine of 1,350 (0.7%) patients treated with oseltamivir contracted pneumonia compared with 19 of 1,063 patients (1.8%) treated with the placebo (P<.001; NNT=91). Patients included in this study varied widely in terms of age and presence of risk factors. Importantly, patients with additional risk factors for pneumonia developed pneumonia at the same rate regardless of treatment with oseltamivir or placebo.2

A 2000 meta-analysis of studies assessing zanamivir use and risk of developing secondary complications of influenza demonstrated that inhaled zanamivir may also be effective for preventing postinfluenza pneumonia. In a total of 1,572 adult patients, 765 received placebo and 807 received inhaled zanamivir.

Fourteen of the 765 placebo-treated patients (1.3%) developed pneumonia compared with 7 of the 807 (0.86%) receiving inhaled zanamivir (RR with zanamivir, 0.6; 95% CI, 0.42–0.85; NNT=226). The occurrence of secondary complications overall while on placebo was 18%, while the occurrence of secondary complications, including pneumonia, on inhaled zanamivir was 13% (P=.006; NNT=20).3

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