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Osetamivir Slightly Decreases Influenza Symptom Duration but Not Hospitalizations

Clinical Question

Is osetamivir (Tamiflu) effective in reducing symptom duration and complications in children and adults with presumed influenza?

Bottom Line

Treatment of children with osetamivir will decrease symptom duration by approximately one day, but will not reduce hospitalizations and does not seem to be effective in children with asthma. In adults, symptom reduction is less striking (less than one day), and hospitalization will not be decreased. Vomiting in both groups is more likely with treatment. (Level of Evidence = 1a)

Synopsis

The authors performing this systematic review of the literature launched a four-year campaign to obtain unpublished data from the manufacturer to supplement the results of a literature review they previously performed for a Cochrane review. They included 23 reports that evaluated the use of osetamivir in children or adults for treatment, prophylaxis, and postexposure prophylaxis of influenza. Three authors independently abstracted and compared the study results. They included 20 studies of moderate quality; up to one-half of the studies had problems with randomization, allocation concealment, and masking of participants, as well as issues with adequate recruiting of patients and reporting of outcomes.

For treatment of adults, osetamivir reduced the time to first alleviation of symptoms from seven to 6.3 days. Hospitalization rates were not different. Nausea

and vomiting were increased with treatment (number needed to treat to harm [NNTH] = 28 and 22, respectively). In children, the results were more striking: an average shortening of symptoms by 29 hours, with wide variability (95% confidence interval, 12 to 47 hours). There was no difference in outcomes for children with asthma. Hospitalization of children was not reduced with treatment. The likelihood of vomiting was higher with treatment (NNTH = 19). A single study showed a reduction in influenza when osetamivir was used for prophylaxis. These results are similar to those from another meta-analysis published last year (*Fam Pract*. 2013;30(2):125-133).

Study design: Meta-analysis (randomized controlled trials)

Funding source: Government

Setting: Various (meta-analysis)

Reference: Jefferson T, Jones M, Doshi P, Spencer EA, Onakpoya I, Heneghan CJ. Osetamivir for influenza in adults and children: systematic review of clinical study reports and summary of regulatory comments. *BMJ*. 2014;348:g2545.

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Physical Therapy No Better Than Sham Therapy for Hip Osteoarthritis

Clinical Question

Is physical therapy useful for reducing pain and improving function in adults with hip osteoarthritis?

Bottom Line

In this study, physical therapy was no more effective than sham therapy in reducing pain and improving function in adults with hip osteoarthritis. (Level of Evidence = 1b)

Synopsis

These investigators identified adults 50 years or older who met the standard criteria for hip osteoarthritis, with an average pain intensity of at least 40 (on a 100-mm visual analog scale) and at least moderate difficulty with daily activities. Eligible patients (N = 102) randomly received (concealed allocation assignment) active physical therapy or sham physical therapy. All participants attended 10 individual therapy sessions: two during the first week, one weekly for six weeks, and then one every ▶

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other week. Active intervention consisted of manual therapy techniques, including manipulation, mobilization, massage, and stretches; home exercises; education and advice; and a walking stick, if appropriate. The sham intervention included inactive ultrasonography and light application of inert gel to the hip region, but no exercise instructions or manual therapy. The study was 80% powered to detect a predetermined clinically significant difference between the two treatment groups, if one existed. Complete follow-up occurred for 94% of participants at 13 weeks and 81% at 36 weeks. Although the treating therapists were not masked to treatment group assignment, a single masked assessor evaluated outcomes using standard scoring tools based on patient self-reports at 13 and 36 weeks. Statistical analysis found no significant evidence that patients could reliably tell to which intervention group they were assigned.

Using intention-to-treat and per-protocol analyses, no significant between-group differences were found for changes in pain or physical function. Likewise, medication use and co-interventions were similar for both groups. Adverse events occurred significantly more often in the active intervention group (41% vs. 14%), including increased hip pain, back pain, stiffness, and pain in other regions.

Study design: Randomized controlled trial (double-blinded)

Funding source: Government

Allocation: Concealed

Setting: Outpatient (primary care)

Reference: Bennell KL, Egerton T, Martin J, et al. Effect of physical therapy on pain and function in patients with hip osteoarthritis: a randomized clinical trial. *JAMA*. 2014;311(19):1987-1997.

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No Benefit to Prolonged Dual Antiplatelet Therapy After Drug-Eluting Stent Placement

Clinical Question

Does prolonged dual antiplatelet therapy after the placement of a drug-eluting stent improve outcomes?

Bottom Line

Prolonging dual antiplatelet therapy with aspirin plus clopidogrel (Plavix) for more than one year after the

placement of a drug-eluting stent confers no clinical benefit. (Level of Evidence = 1b)

Synopsis

Current American College of Cardiology guidelines recommend dual antiplatelet therapy following drug-eluting stent placement for at least 12 months (*J Am Coll Cardiol*. 2011;57(19):1920-1959). Among patients who tolerate dual therapy for 12 months, is there any benefit to prolonged treatment for another two years? In this study, 5,045 patients received a drug-eluting stent and tolerated at least one year of dual antiplatelet therapy with aspirin and clopidogrel. None experienced a stroke, myocardial infarction, revascularization, or major bleeding episode during that period. They were then randomized to receive continued dual therapy or aspirin alone, receiving the drug(s) in an open-label fashion. However, outcomes were adjudicated by a committee that was masked to treatment assignment. The groups were balanced at the start of the study, with a mean age of 62 years; 69% of participants were men and 28% had diabetes mellitus. Approximately 80% were recruited after 12 to 18 months of successful dual antiplatelet therapy (the remainder after a longer period).

Compliance with aspirin was good throughout the trial, although compliance with clopidogrel in the group assigned to dual therapy declined to less than 80% after two years. There was no difference in the likelihood of any individual or combined cardiovascular or bleeding outcomes. Overall, the combination of cardiac death, myocardial infarction, stroke, stent thrombosis, or major bleeding occurred in 3.2% of the aspirin-only group and in 3.8% of the dual therapy group (hazard ratio = 0.84; 95% confidence interval, 0.62 to 1.14).

Study design: Randomized controlled trial (single-blinded)

Funding source: Foundation

Allocation: Concealed

Setting: Outpatient (specialty)

Reference: Lee CW, Ahn JM, Park DK, et al. Optimal duration of dual antiplatelet therapy after drug-eluting stent implantation: a randomized, controlled trial. *Circulation*. 2014;129(3):304-312.

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