

Acyclovir for herpetic gingivostomatitis in children

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Abstract

Question Every year I see preschool children with gingivostomatitis. There seems to be quite a substantial burden of illness with this condition. Because it is caused by herpes simplex virus type 1, should I prescribe antiherpetic therapy with oral acyclovir?

Answer While most children with primary gingivostomatitis will be asymptomatic, some will experience considerable pain and discomfort and are at risk of dehydration. There are no large, well designed studies to clearly determine appropriate therapy for all children. Based on a single randomized study, treatment should be started only within the first 72 hours of symptom onset if substantial pain or dehydration are documented.



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Primary herpetic gingivostomatitis is a common pediatric infection caused in 90% of cases by herpes simplex virus type 1. It is usually seen before 6 years of age.¹ While most children will be asymptomatic, diagnosis of children with symptoms is made based on clinical presentation of erythematous gingiva, mucosal hemorrhages, and clusters of small erupted vesicles throughout the mouth.

The condition is highly contagious,¹ and complications range from indolent cold sores¹ to dehydration² and even life-threatening encephalitis.³ Among 61 children 1 to 6 years of age from Israel, 89% drank less than normal, and 2 of 36 patients were unable to drink.²

Symptomatic relief primarily involves pain management and oral fluids to prevent dehydration until the viral infection subsides. In a chart review in a US children's hospital, 48 patients 8 months to 12 years of age were treated with fluids and analgesics; 35 of them were also given a mixture of antacid and diphenhydramine and 7 were treated with viscous lidocaine.⁴ Outcomes were not reported.

Acyclovir is a well established antiviral drug used effectively for the treatment of herpes simplex infections, chickenpox (shortened fever time),⁵ and shingles.^{5,6} It is also used frequently for children with immunodeficiency.

Acyclovir treatment

Despite the high incidence and burden of this viral illness, little research has been done to determine the value of antiviral therapy.

An open study from the 1980s with 33 children showed that acyclovir was associated with resolution of

fever after 3 days, and considerable improvement (90%) of oral lesions and pain within 6 days.⁷ A retrospective study from Italy⁸ reported that among 162 young children, symptom regression was faster in those treated for 5 to 6 days with acyclovir, compared with those who received no antiviral therapy.

In 1 of only 3 randomized trials,⁹ published as a conference abstract, 68 children presenting within 96 hours of symptom onset showed significant reductions in median symptom duration of 20% to 50% when receiving acyclovir ($P < .05$). Oral lesions resolved faster with acyclovir (6 vs 8 days). Gum swelling and drooling resolved faster (5 vs 7 days and 4 vs 8 days, respectively), and viral shedding stopped earlier (4 vs 10 days).

Another study with a small sample size¹⁰ of 11 boys and 9 girls (mean age 2 years) with primary herpetic infection for less than 4 days was conducted in France (mean duration of symptoms before treatment was 2.5 days). While children taking acyclovir had fever more frequently than those receiving placebo did, most of their characteristics were similar. Pain resolved faster with acyclovir ($P < .05$), but the authors provided no explanation for how this was measured. Similarly, excessive drooling resolved faster ($P < .05$). However, return to normal feeding, time to reach normal temperature, and measurement of lesions in several oral locations were similar in both groups.

The third randomized trial from Israel in the 1990s examined 61 children 1 to 6 years of age.² Both groups had similar severity of clinical symptoms and received either a suspension of acyclovir (15 mg/kg [0.375 mL/kg]) or placebo 5 times a day for 7 days. They found that in

the children taking acyclovir oral lesions resolved faster (median 4 vs 10 days), fever resolved faster (1 vs 3 days), extraoral lesions improved (0 vs 5.5 days), and eating (4 vs 7 days) and drinking (3 vs 6 days) improved. Further, herpes viral shedding was shorter in the group treated with acyclovir (1 vs 5 days).

In a 2008 Cochrane summary of the latter 2 trials,¹¹ only the trial by Amir et al² was considered by the reviewers to be of adequate quality, and they found that it showed a weak benefit to using acyclovir within the first 3 days of symptoms.

Conclusion

Based on very limited research, PRETx suggests treating children with acyclovir only within the first 72 hours of symptom onset, as long as they have clear symptoms of gingivostomatitis and suffer from substantial pain or dehydration. The current recommended dose of oral acyclovir is 40 to 80 mg/kg a day, divided in 3 or 4 doses, for 7 days. Caregivers should be aware of potential adverse effects of acyclovir such as headache, malaise, and vomiting. 

Competing interests

None declared

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