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Treatment of children for primary acute herpetic gingivostomatitis with lactobacillus in aqueous suspension

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Abstract

A study was performed in a private pediatric dental office to evaluate the effectiveness of a lactobacillus preparation in aqueous suspension in the treatment of 33 children ages 2-10 years with acute primary herpetic gingivostomatitis. The preparation was given 4 times per day for 7 days and the children were observed every other day. Twenty-eight patients had diminished pain within 24 hr and 33 had diminished pain within 48 hr. All 33 patients had total relief after 72 hr. All lesions disappeared after 7 days. No side-effects or complications developed. These findings demonstrate that patients suffering from acute herpetic gingivostomatitis may be treated effectively with this viable alternative form of lactobacillus.

The disease acute herpetic gingivostomatitis occurs in children at any age, although in most reports the symptoms usually are manifest between the ages of 2 and 9 years. Brook (1973) reports the peak incidence of the disease to be 2 years of age. It rarely occurs before the age of 6 months because of circulating antibodies in the infant derived from the immune mother.

The chief complaint is extreme pain and soreness of the mouth so severe that the child has great difficulty eating, drinking, or even swallowing. Primary herpetic gingivostomatitis can usually be diagnosed by the patient's history and by clinical examination. However, it may present a difficult diagnostic problem for a physician when a child with fever is seen early in the illness before the prominent symptoms of the disease have appeared (Moffet 1981). By the time the pediatric dentist has been consulted the prominent symptoms are usually very apparent. Most authors agree that sophisticated antibody titre and viral cultures are impractical because these are expensive and results are usually not obtained until after the patient has begun recovery.

Roller (1983) reports the criteria for confirming acute primary herpetic gingivostomatitis include no previous HSV-I infections, prodromal and clinical course, temperature elevation and oral appearance. The acute type of herpetic gingivostomatitis usually manifests itself as vesicles which coalesce, leaving bleeding ulcers, and most frequently involving the lips, oral mucosa, gingivae, and tongue. These lesions sometimes are macerated and covered with a yellowish or grayish membrane. The adjacent dental margins of the gingivae are usually erythematous and regional lymphadenopathy is present. Lesions of primary herpetic gingivostomatitis usually differ from secondary herpetic stomatitis in that the lesions tend to be grouped. The infection usually runs a natural course in 10-14 days.

One problem associated with the stomatitis infection is dehydration. Some children with severe cases may require hospitalization with the administration of intravenous fluids to arrest dehydration, as the child cannot or will not eat or drink because of the severe pain of the oral cavity.

Lichtenstein et al. (1964) reported good results with lactobacillus acidophilus in the treatment of 11 cases of primary herpetic gingivostomatitis, with all patients reporting relief of pain within 24 hr.

Materials and Methods

A total of 33 pre-adolescent patients were examined, ranging in age from 2 to 10 years. There were 15 males and 18 female patients with varying degrees of primary herpetic stomatitis ranging from mild affliction to severe cases of total involvement of the oral mucosa. In some patients, symptoms were evident for several days prior to examination. Treatments prescribed for each child included a stabilized aqueous suspension of lactobacilli (Oralak® suspension — Fairleigh Dickinson Laboratories; Abilene, TX). Parents were instructed to have the children swish 1 teaspoon of the medication in their mouth for as long as possible before swallowing and repeat the procedure 4 times each day for 7 days. Concurrently, a liquid and soft, bland diet was prescribed for the patients and parents were encouraged to force liquids to meet fluid intake requirements.

Patients were re-examined on the second full day after treatment was begun, and on every second day following. Parents were questioned and results were charted (Table). The table does not include an allowance for the number of days symptoms were evident prior to administration of the prescribed treatment.

TABLE. Symptomatic Relief for Patients Using Oralak*® Suspension

Time Period	*Diminished Pain*	*Total Pain Relief*	*Disappearance of Lesions*
24 hr	28	21	0
48 hr	33	31	0
72 hr	33	33	0
5 days	33	33	30
7 days	33	33	33

* Fairleigh Dickinson Laboratories; Abilene, TX.

Results

All patients in the study group experienced total relief of pain within 72 hr after treatment with the lactobacillus suspension and all symptoms, including lesions and inflammation, disappeared within 7 days. As shown in the table, diminished pain resulted within 24 hr for 28 patients (85%), and within 48 hr for all 33 patients examined. With decreased pain, patients were better able to consume fluids.

Discussion

The results of this study show relief of pain and the disappearance of lesions may have occurred in a shorter period of time than evidenced with the use of alternate forms of lactobacillus or when the lesions remain untreated. It is recognized, however, that any child who may have had lesions present for 5-6 days before treatment was begun could have healed spontaneously at the same rate. This study also provides preliminary evidence of the need for further investigation using controls and double-blind procedures. In private practice, studies such as these are impractical and do not allow for the proper treatment of all patients involved.

The manner in which a lactobacillus suspension produces a therapeutic response in patients with herpetic stomatitis remains unknown. It is of importance to note that this therapeutic approach employs viable organisms of one type (lactobacilli) to combat viable organisms of another type (herpes simplex virus) by acting as a virostatic agent. There is no evidence from this study that the lactobacilli were virostatic other than clinical observation demonstrating cessation of pain, the disappearance of lesions, the ability of the child to swallow more easily, the improvement of malaise, and the reduction in fever.

Finally, the results of this study, using a limited number of patients in a private dental practice, presents preliminary evidence that lactobacilli in a liquid form greatly aids in the relief of pain and other symptoms of acute primary herpetic gingivostomatitis. In most cases, pain relief occurs within 48 hr, and the period of vicera-tion and inflammation lasted only 7 days after treatment was started. These results also indicate that lactobacilli in liquid form appears to be as effective as tablets or granules when compared to other reported studies. Complete objectivity is difficult in a study such as this, but the aqueous lactobacillus preparation showed a high degree of palatability, ease of administration, and may be useful in treating herpetic lesions.

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Brook A: Acute herpetic gingivostomatitis in children. J Dent Child 40:12-18, 1973.

Lichtenstein J, Kopp WK, Hirsch N: The therapeutic value of lactobacillus acidophilus in acute primary herpetic gingivostomatitis: clinical impressions. J Oral Therapeut Pharm 1:308-12, 1964.

Moffet HL: Pediatric Infectious Diseases, 2nd ed. Philadelphia; JP Lippincott Co, 1981 pp 20-22.

Roller NW: Primary herpetic gingivostomatitis in the adult. Gen Dent 31:101-3, 1983.