

How successfully do general practitioners diagnose herpetic gingivo-stomatitis clinically?

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SUMMARY

Herpetic gingivo-stomatitis is a common, often painful affliction of young children. Recently, aciclovir treatment has been found to be effective in hospital-referred cases, an approach limited in general practice where laboratory diagnosis is invariably impractical. This study demonstrated that 49 out of 63 clinical diagnoses of herpetic gingivo-stomatitis [PPV = 78%] made by 27 GPs were subsequently validated by laboratory virus culture. This suggests that herpetic gingivo-stomatitis might be treated with aciclovir in general practice on the basis of a clinical diagnosis alone.

Keywords: herpes simplex virus; children; self-limiting disease; diagnosis; aciclovir.

Introduction

HERPETIC gingivo-stomatitis is usually the earliest and arguably the commonest manifestation of primary infection by the type I herpes simplex virus (HSV).¹ The peak incidence of herpetic gingivo-stomatitis occurs between nine and 28 months of age: it is almost never found in the first six months of life. The incubation period varies between two and 12 days and nearly 85% of children have encountered it by the age of six. It is more common in the socially underprivileged but its distribution shows no sex or seasonal differences and in only about a quarter of cases is there a history of recent contact with similarly affected children.²

Although self-limiting, if sometimes prolonged, herpetic gingivo-stomatitis may still cause considerable distress and anxiety to both the child and the parents. Occasionally, if dehydration threatens or develops, hospital admission may become necessary.

The traditional primary care management of herpetic gingivo-stomatitis is symptomatic but one recent study reported promising results using oral aciclovir among children with herpetic gingivo-stomatitis attending a hospital day-care unit.³ This approach, however, is limited in the surgery as the prevalence of a herpetic aetiology among all cases of community-acquired gingivo-stomatitis remains unknown and ordering laboratory tests is usually impractical. Further, even if anti-viral medication is effective, this may only be true if started early.⁴

Thus a general practitioner's (GP's) practical difficulty is not really knowing whether oral ulceration in an ill child is herpetic in origin or not; to justify starting immediate anti-viral treatment the likelihood of his making a correct clinical diagnosis of the disease in the surgery would have to be substantial.

We report here a two-year prospective study which examined how closely the clinical diagnoses of herpetic gingivo-stomatitis in children made by a group of Jerusalem GPs actually tallied with the subsequent laboratory diagnoses.

Method

A convenience sample of 27 Jerusalem GPs was recruited for the study. By means of a questionnaire each participating doctor reported the clinical and demographic details of every child aged between six months to six years in whom a clinical diagnosis of herpetic gingivo-stomatitis had been made during 1999 and 2000.

A swab (Virocult, Medical Wire & Equipment Co Ltd, Corsham, Wilts, England) was also taken from the oral lesions and sent for viral culture to the Clinical Virology Unit

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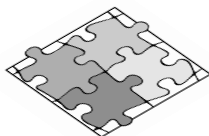
HOW THIS FITS IN

What do we know?

Several studies have shown that treating laboratory-confirmed herpetic gingivo-stomatitis with aciclovir can shorten the duration of its symptoms and infectivity in children.

What does this paper add?

The clinical diagnosis of herpetic gingivo-stomatitis in children by a group of 27 GPs tallied with the subsequent laboratory diagnosis on 49 out of 63 occasions (78%). This suggests that a clinical diagnosis of the condition may be sufficient to justify immediate treatment with aciclovir without the need for confirmatory laboratory testing.



of the Hadassah Medical School. An extract of the swab was prepared in buffer and inoculated into Vero cell cultures which were then surveyed for cytopathic effects for up to a maximum of 14 days. A positive herpes simplex type 1 cell culture obtained in this way constituted the 'gold standard' against which the clinical diagnosis was compared.

Results

During the study, virus swabs were taken from 67 children (38 males, average age 1.9 years; 29 females, average age 2.1 years). Four swabs (two from males, two from females) had to be discarded during culture because of toxic reactions. Forty-nine of the remaining swabs (29 from males, 20 from females) proved positive in cell culture for herpes. Thus, in the study, the positive predictive value (PPV) of the GPs clinical diagnoses of the disease for true occurrence of herpetic gingivo-stomatitis was 78% (49/63).

Discussion

This study examined how well the clinical diagnoses of herpetic gingivo-stomatitis made by a group of GPs tallied with the 'gold standard' diagnosis determined by virus culture.

In everyday practice, GPs may wish to decide clinically whether or not children with ulcerative oral lesions have herpetic gingivo-stomatitis. Such a decision may not always be simple as the differential diagnosis is extensive and includes varicella, herpangina, Stevens-Johnson syndrome, and hand, foot, and mouth disease.^{5,6} As a result it will probably never be possible to unequivocally define herpetic gingivo-stomatitis clinically as its signs and symptoms lack sufficient sensitivity and specificity. Therefore, in common with many other clinical entities, the primary care diagnosis of herpetic gingivo-stomatitis mainly depends on pattern recognition by the GP although some features, such as the age of the child and an earlier similar disease in siblings, may prove helpful.

Altogether, two recent non-blinded studies have indicated that treatment of herpetic gingivo-stomatitis with aciclovir suspension shortens the duration of symptoms, and three randomised controlled trials indicated that early aciclovir treatment significantly shortens its clinical manifestations and infectivity in children.⁴ Thus there may be considerable therapeutic advantages to be gained from the accurate early

diagnosis of herpetic gingivo-stomatitis — and the GPs in this study were successful almost four times out of five at accomplishing this when they ventured to do so on clinical grounds alone. Accordingly, we believe this may be a high enough level of diagnostic acumen to warrant entertaining a policy of starting anti-viral medication immediately when herpetic gingivo-stomatitis is diagnosed clinically in the surgery. Further studies and research among other population groups would, of course, be useful to further substantiate this recommendation.

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