

Allegato/Enclosure 8

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TECHNICAL FILE

ALOCLAIR gel

Safety and Efficacy of Aloclair™ Gel in the treatment of Oral Aphthous Lesions in Children:

Preliminary Findings from an Open Pilot Study

Investigator: Rolando Cimaz, M.D., paediatrician, Milan, Italy.

Aim of the study

The aim of this open, pilot study was to evaluate the safety and efficacy of "Aloclair™ Gel", in the treatment of oral aphthous lesions in infants and children.

Background information

The incidence of recurrent mouth ulcers, or aphthous stomatitis is estimated as 10-25%¹. Of these, 80% are classified as having minor aphthous stomatitis, where individual ulcers last up to 10 days. A further 10-12% have major aphthous stomatitis, where ulcers are larger (>10mm diameter) and last longer (two weeks to several months). The remainder have herpetiform stomatitis, where multiple small ulcers are seen. Peak onset of ulcers appears to be in children, adolescents and young adults. Indeed, aphthous stomatitis is frequent in childhood, particularly in the context of viral illnesses. The disease, even though it is usually self-limiting, can be very distressing for both the patient and his/her family, especially when the pain provoked by food becomes severe.

Currently, therapeutic options for this condition are limited. Moreover, in paediatric patients, taste, ease of use and compliance are very important factors.

Aloclair™ Gel

The product contains: polyvinylpyrrolidone, maltodextrin, propylene glycol, hydrogenated castor oil (40) OE, xanthan gum, potassium sorbate, sodium benzoate, aroma, sodium hyaluronate, sodium saccharine, EDTA sodium salt, benzalkonium chloride, glycyrrhetic acid, aloe vera extract and de-mineralised water. It is presented in a small tube with an applicator, so that one or two drops can be deposited directly on the lesions.

In view of its presentation and its film-forming properties, Aloclair™ Gel was considered to be a possible suitable product to manage the pain caused by oral aphthous lesions for patients who are unable to use a mouthwash and gargle, particularly infants and children. A similar product for adults (Aloclair™ Mouthwash), already on the market for nearly two years, has demonstrated excellent efficacy and tolerability.

Timing and materials

The study was conducted from the 2nd January 2002 to the 28th February 2002. The trial product was supplied by Sinclair Pharma S.r.l. of Milan, who ensured that sufficient quantities were available for the whole duration of the study.

Selection of patients

This pilot study was conducted on 20 out-patients in a paediatric practice in Milan, Italy. The patients selected were recruited consecutively and comprised children of both sexes between the ages of 2 months and 8 years (see tables at the end). The nature of the

¹ Odell EW, Lim P, Bhargava R, Twitchen M. *Comprehensive review of treatment for recurrent aphthous stomatitis.* <http://www.ac.uk/dental/opath/daphttr1.htm>

treatment and the demands of the trial were explained and oral informed consent was obtained from a parent or guardian in all cases.

Inclusion and exclusion criteria

Included in this open, pilot study were infants and children with aphthous stomatitis. There were no exclusion criteria. Other topical treatments for the ulcers were suspended for the duration of the study.

Method

Parents/guardians were instructed to apply one or two drops of Aloclair™ Gel to the ulcers so as to cover them completely every 5-8 hours before feeding/meals until complete remission or for a maximum of 7 days, taking care that the tip of the applicator did not touch the ulcers themselves. The children were examined by the same physician before and after treatment and the parameters evaluated were recorded on a customised data form. The parameters evaluated were:

1. duration of ulcers before starting Aloclair™ Gel
2. presence of fever;
3. number of oral aphthous ulcers before treatment;
4. average diameter of oral aphthous ulcers before treatment, in millimetres;
5. subjective perception of pain before and after treatment – on a 4-point scale: none, slight, moderate, severe;
6. difficulty in swallowing solids and liquids before and after treatment – on a 4-point scale: none, slight, moderate, severe;
7. time to obtain an improvement;
8. time to complete remission;
9. perception of pleasantness – on a 4-point scale: poor, fair, good, excellent;
10. ease of application – on a 4-point scale: very difficult, quite difficult, easy, very easy;
11. child's/parent's overall opinion of effectiveness – on a 4-point scale: poor, fair, good, excellent;
12. investigator's overall opinion of effectiveness – on a 4-point scale: poor, fair, good, excellent.

An assessment of compliance was obtained by questioning the parents or guardian.

Results

Twenty patients (11 females, 9 males) entered the study protocol. Median age was 2.6 years, ranging from 2 months to 8 years and 8 months (see Table 1). Stomatitis was accompanied by fever in 9 cases, and had been present before treatment for a mean of 2 days (range, 1-6). The number of oral ulcerations ranged from 2 to 15 (median, 6), and their size from 2mm to 10mm (median, 5 mm). Before treatment, pain was judged to be present in all cases (recorded as severe in 9 patients and moderate in 9). Solid food intake was not evaluable in the case of one child who was only 2 months old but it was impaired in all other cases; liquid intake was impaired in all cases.

The duration of treatment ranged from 2 to 7 days (mean, 3.5) although 9 of the parents continued to apply Aloclair™ Gel for 1-2 days after the ulcers had healed. The mean number of applications of Aloclair™ Gel was 3.2/day (range 2-6). Symptomatic improvement was obtained in all cases (mean, 2 days) and in all but 1 patient there was complete resolution of signs and symptoms, with a mean period to remission of 3 days (range, 2-5). After treatment: pain was either absent or slight, and persisted in only one case;

difficulty in swallowing solids and liquids completely disappeared in all cases but one (see Table 5 and graphs).

The product was judged easy to apply in the majority of cases, and its taste (pleasantness) was considered acceptable. On a 4-point scale, compliance was judged to be good in 12 cases and excellent in 8. The parents were very positive about the treatment in 19 cases whilst the investigating physician's global judgement was positive in 19 of the 20 patients.

No adverse events were reported.

Conclusion

In this open, pilot study carried out with Aloclair™ Gel, the product was well tolerated, easy to use and favourably accepted by the patients or their parents.

There was observed rapid and considerable reduction in the subjective perception of pain and the difficulty in swallowing solid food and liquids, and in all except one of the 20 patients healing had occurred within 5 days. This study suggests that Aloclair™ Gel is effective as an intervention option to manage aphthous stomatitis in infants and children.

Signature of the investigator :



Date : March 29, 2002

Efficacy and Safety of Aloclair™ Gel in the treatment of Oral Aphthous Lesions in Children: Preliminary Findings from an Open Pilot Study – Tables and Figures

Table 1: Age and sex of patients included in the open study

Age	M	F	Total
2 – 12 months	3	1	4
13 – 24 months	2	1	3
25 – 36 months	0	4	4
4 years	0	2	2
5 years	2	1	3
6 years	1	0	1
7 years	0	1	1
8 years	1	1	2

Table 2: Number of aphthæ before treatment

N° of lesions	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15+
N° of patients	4	3	4	4	2	2	0	1

Table 3: Average size of aphthæ before treatment

Diameter (mm)	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10
N° of patients	1	4	4	2	2	4	1	0	2

Table 4: Duration of lesions & pyrexia before treatment, times to improvement & remission

	1 day	2 days	3 days	4 days	5 days	6 days	7+ days
Duration of pyrexia before treatment	2	3	3	1	0	0	0
Duration of lesions before treatment	6	7	5	1	0	1	0
Time to improvement	9	9	0	2	0	0	0
Time to remission	0	3	8	3	5	0	(1*)

* Therapy changed after some improvement in the most severe case.

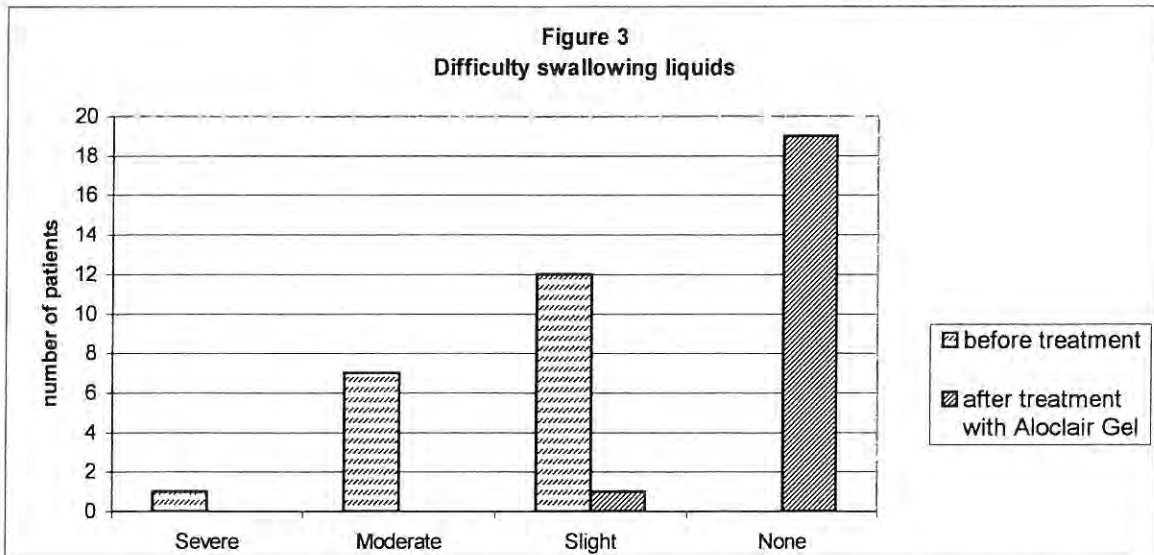
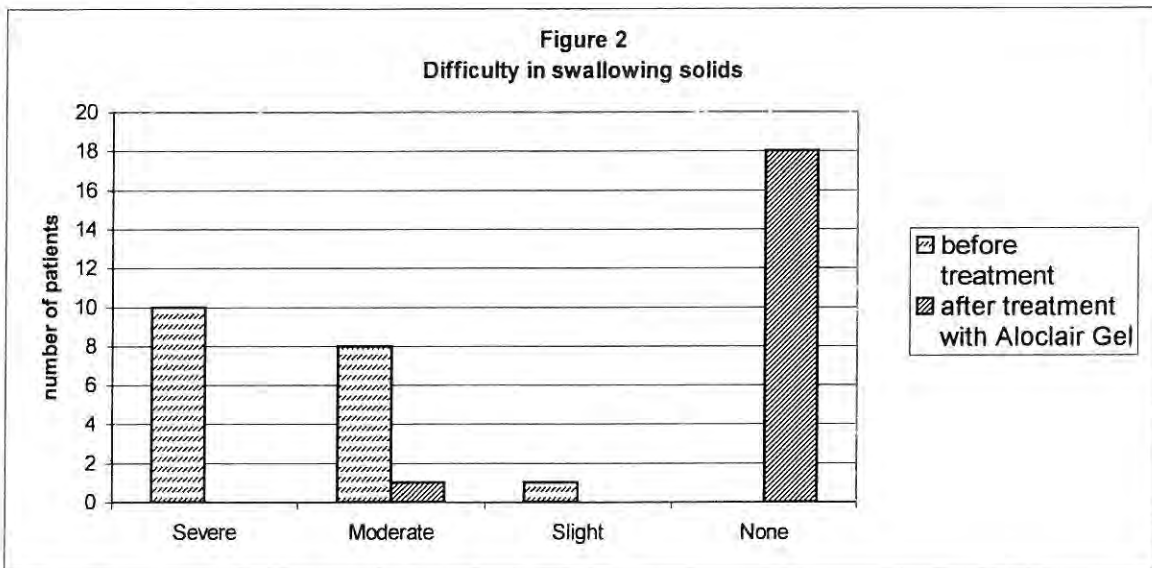
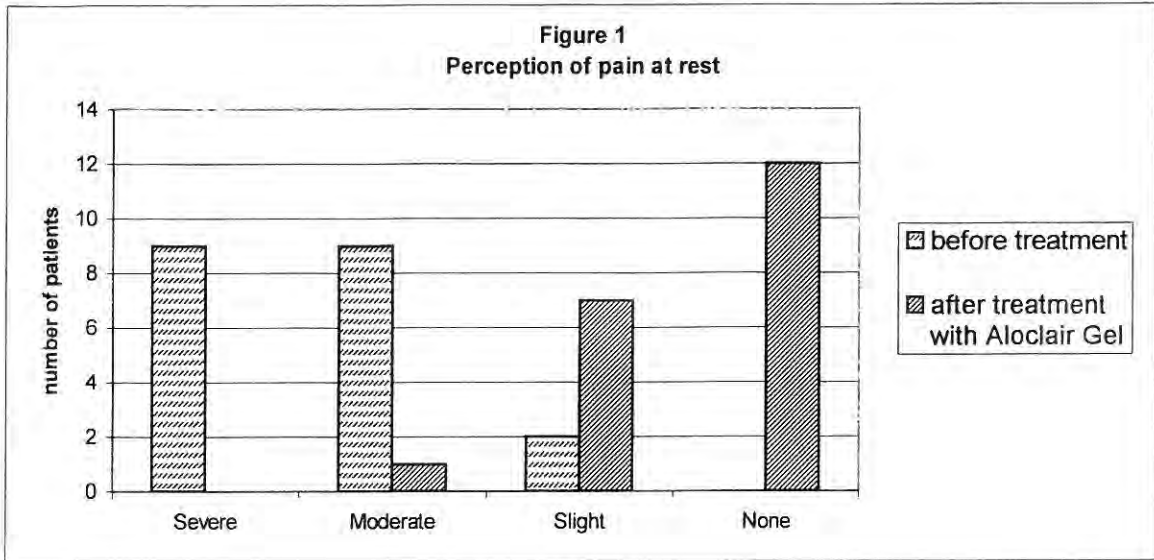
Table 5: Perception of oral pain at rest & difficulty in swallowing

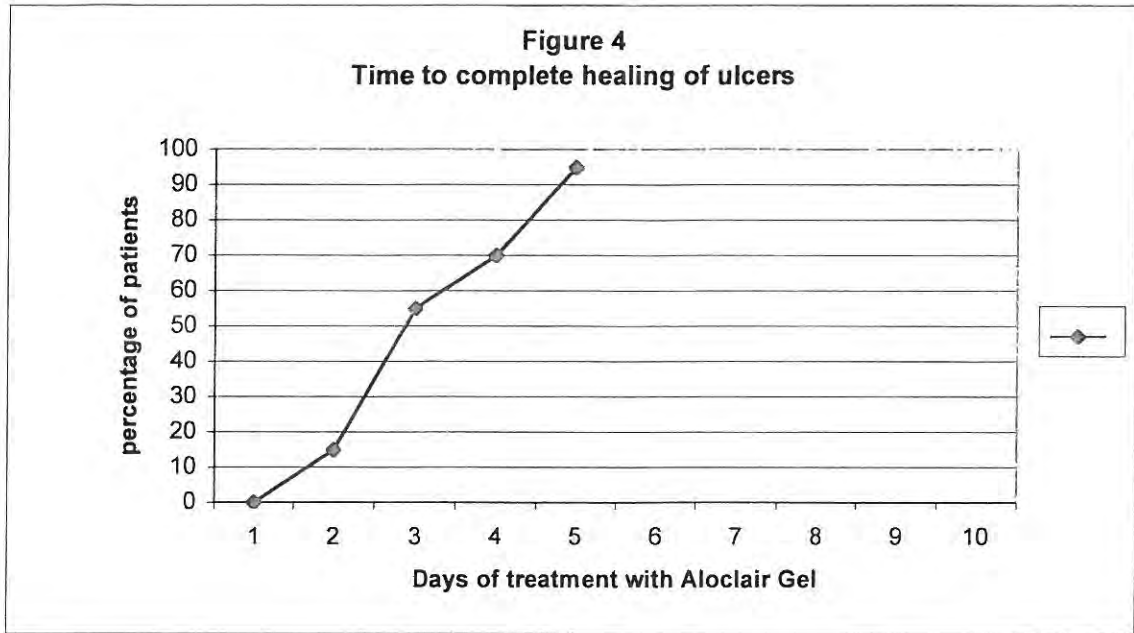
	None	Slight	Moderate	Severe
Pain before treatment at rest	0	2	9	9
after treatment	12	7	1	0
Solids* before treatment	0	1	8	10
after treatment	18	0	1	0
Liquids before treatment	0	12	7	1
after treatment	19	1	0	0

* Not applicable in the case of one infant 2 months old

Table 8: Use, Opinions

	Poor	Fair	Good	Excellent
Ease of application	0	3	8	9
Pleasantness	0	0	13	7
Compliance	0	0	12	8
Child's/Parents' opinion	1	0	11	8
Investigator's opinion	0	1	7	12





Signature of the investigator:

Date:

March 29, 2002