1. ABSTRACT

Background: LPV/r 'pellets' (palsabin) provided similar exposure to LPV/r syrup in the CHAPAS-2 trial. After 12 weeks, the acceptability was better among younger children, but older children preferred tablets. Here we describe acceptability at week 48.

Methods: CHAPAS-2 was a randomized phase IIb trial in HIV-infected children. Children aged 4-13 yrs (group C, n=36) started minitabs and switched to syrup or vice versa; and children aged 4-13 yrs (group B, n=26) started tablets and switched to minitabs or vice versa. At week 8, all groups chose which formulation to continue. Formulation acceptability data were collected at weeks 4, 8, 12, and 48. Study medication was collected at week 48.

Results: For groups A and B overall, the proportion preferring minitabs increased between weeks 0 and 12 and decreased at week 48 (group A 37%, 72%, 44%; group B 12%, 64% and 36% respectively). Of 19 children with VL assayed at week 48 from group A, 12/19 preferred minitabs, whereas among older children, minitabs were worse (group C 4/13 preferred minitabs at week 48 vs 10/13 preferred syrup or vice versa). At week 8, all groups chose which formulation to continue. Formulation acceptability data were collected at weeks 4, 8, 12, and 48. Study medication was collected at week 48.

Conclusions: The proportion preferring minitabs increased between weeks 0 and 12 and decreased at week 48 (group A 37%, 72%, 44%; group B 12%, 64% and 36% respectively). However at week 48, group A preferred minitabs (60%/40%) whereas group B preferred syrup (82%/18%). Of 19 children with VL assayed at week 48 from group A, 12/19 preferred minitabs, whereas among older children, minitabs were worse (group C 4/13 preferred minitabs at week 48 vs 10/13 preferred syrup or vice versa).

2. INTRODUCTION

Guidelines recommend a protease inhibitor (ritonavir boosted lopinavir (LPV/r)) for first- and second-line antiretroviral therapy (ART) in younger and older HIV-infected children, respectively. Access to second-line ART is increasing, but remains low (<40%) in resource-limited settings. Limited experience (especially in African infants and children) and lack of availability of affordable and appropriate paediatric formulations has restricted roll-out.

The current LPV/r paediatric formulations are expensive; tablets are large and must not be crushed/split; syrup has an unpleasant taste and require refrigeration and are used relatively infrequently (<1,500 infants and children in 2013 (WHO Global PrEP Reporting Mechanism))

We previously reported that LPV/r exposure from a minitab formulation in capsules was comparable to oral syrup, but differences in taste were subjectively rated worse in the syrup formulation than the minitab formulation.

In the first weeks of the study, pellets were more acceptable than syrup for younger children, but older children preferred tablets.

In this study we evaluated acceptability of syrup to tablets up to week 48.

3. METHODS

A: Infants aged 2-12 months and Group A: Infants aged 1-3 years
B: Infants aged 1-3 years
C: Infants aged 4-13 years
D: Children aged 4-13 years

Table 1: Description of the CHAPAS-2 trial

<table>
<thead>
<tr>
<th>Group</th>
<th>Week 48</th>
<th>Week 12</th>
<th>Week 4</th>
<th>Week 48</th>
<th>Week 12</th>
<th>Week 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Infants aged 2-12 months</td>
<td>52%</td>
<td>60%</td>
<td>66%</td>
<td>52%</td>
<td>60%</td>
<td>66%</td>
</tr>
<tr>
<td>B: Infants aged 1-3 years</td>
<td>40%</td>
<td>52%</td>
<td>60%</td>
<td>40%</td>
<td>52%</td>
<td>60%</td>
</tr>
<tr>
<td>C: Infants aged 4-13 years</td>
<td>60%</td>
<td>72%</td>
<td>80%</td>
<td>60%</td>
<td>72%</td>
<td>80%</td>
</tr>
<tr>
<td>D: Children aged 4-13 years</td>
<td>60%</td>
<td>72%</td>
<td>80%</td>
<td>60%</td>
<td>72%</td>
<td>80%</td>
</tr>
</tbody>
</table>

Figure 1: Acceptability of Lopinavir/r Minitabs (Pellets), Tablets and Syrups in HIV-Infected Children

4. RESULTS

4.1 Parent preference for pellets

Figure 2: Proportion of parents preferring pellets by group and follow-up period

5. CONCLUSIONS

For infants and children, pellets were better accepted than syrup at week 48.

For Grodela A & B, the proportion of parents preferring pellets increased between enrolment and week 12 and decreased thereafter

For Group B at week 48, 70% of patients at JRCR preferred pellets compared to 13% at PIDC

For Group C, preference for pellets fell over the follow-up period

6. ACKNOWLEDGEMENTS

The authors thank all study participants and the study team.

7. REFERENCES


8. ADDITIONAL INFORMATION

For more information, please visit the CHAPAS-2 trial website: [http://www.chapas2.com/]

9. CONFLICT OF INTEREST

None of the authors have any conflicts of interest.

10. AUTHOR INFORMATION

Akech Keitiinwa, MD, PhD, Dr. Ali Judd, PhD, MD

1. Baylor College of Medicine Children’s Foundation Uganda, Mulago Hospital Kampa; 2. Joint Clinical Research Centre, Kampala, Uganda; 3. Medical Research Council Unit at University College London, UK; 4. Drugs for Neglected Diseases initiative, Geneva, Switzerland.