Abstracts

Abstract G156

<table>
<thead>
<tr>
<th>Wheeze at any time in past</th>
<th>Study participants n (%)</th>
<th>Mozambican cohort%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4 (16.7)</td>
<td>20.3</td>
</tr>
<tr>
<td>Wheeze in last 12 months</td>
<td>1 (4.2)</td>
<td>1.12</td>
</tr>
<tr>
<td>Cough straight in last 12 months</td>
<td>10 (41.7)</td>
<td>22.7</td>
</tr>
</tbody>
</table>

Recruiting Ethnic Minority Participants to a Clinical Trial: Qualitative Study

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Objectives To compare the motives and experiences of different ethnic groups participating in a randomised double blind placebo-controlled trial of montelukast in preschool wheeze, and to assess parents’ or guardians’ understanding of trial procedures and their implications, including the collection of genetic material.

Design qualitative interviews with parents or guardians.

Setting Parents of children recruited following medical attendance with wheeze were interviewed in their homes.

Participants 42 parents, (20 of Bangladeshi origin, 10 white UK, 12 other ethnicities).

Results Anxiety related to wheezing was a common primary motive for trial enrolment. Parents viewed the trial as a route to improved treatment. Verbal delivery of trial information was more effective than study literature, especially for Bangladeshi families, with low parental literacy and high levels of trust in medical professionals contributing to this effect. All ethnic groups expressed a low understanding and/or retention of essential study concepts such as randomisation and genetic testing.

Conclusions Bangladeshi families are particularly motivated to participate in clinical trials despite variable comprehension of study concepts. This motivation is more strongly contingent on strong researcher-subject rapport than on the quality of study literature. Trial teams seeking to recruit from South Asian populations should emphasise face-to-face verbal explanation of trial concepts and procedures and consider modified trial literature.

The Use of Structured Light Plethysmography to Assess the Effect of Feeding on Tidal Breathing Patterns in Newborns

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Aims The aim of the study was to evaluate tidal breathing patterns in healthy newborns using Structured Light Plethysmography (SLP), and to compare the relative contributions of the ribcage and abdominal compartments in measurements taken pre and post feeding. The opportunities to non-invasively measure neonatal lung function are limited. SLP is novel non-invasive method of assessing chest-abdominal wall movement, with potential application in a newborn and infant population.

Methods 17 healthy newborns (7 male and 10 female) from the Rosie Maternity Hospital were studied using SLP-based device, Tho

Pre and post feeding measurements of tidal breaths: inspiration time (ti), expiration time (te), respiration rate. The following parameters were calculated from Konno-Mead (KM) plots: overall phase, spread, principal angle, rotation direction, and ribcage vs. abdomen asymmetry. Principal angle and spread were calculated by performing Principal Component Analysis on the samples comprising the KM loop data. Ribcage vs. abdomen asymmetry was found for each point on the KM loop by evaluating the distance between individual points and the expected response given a zero phase difference. The Brown Forsythe test was used to test equality of group of variances, the Wilcoxon test for equality in mean and median for the paired data, and Mann-Whitney U test for equality in mean and median for the unpaired data. In all cases, a two-tailed test was performed.

Results Respiratory rate, inspiratory and expiratory times remain constant pre and post feeds. The paired samples (n = 8) showed a significant change in variation of ribcage vs. abdomen phase (p < 0.025). The unpaired data (n1 = 13, n2 = 19) showed change in variation of the principal angle, the overall phase and ribcage vs. abdomen phase (p < 0.05). Each data collection took approximately 15 minutes including parental consent.

Conclusion The results indicate that newborn breathing pattern become more stable after feeding, and that SLP provides a non-invasive method of assessment of tidal breathing pattern in infants.