INTRODUCTION

Injections for vaccination, the most common source of iatrogenic pain in childhood, are administered repeatedly to almost all children throughout infancy, childhood, and adolescence. The pain associated with such injections is a source of distress for children, their parents, and those administering the injections. If not addressed, this pain can lead to preprocedural anxiety in the future, needle fear and health care avoidance behaviors, resulting in nonadherence with vaccination schedules.[1] It is estimated that up to 25% of adults have a fear of needles, with most fears developing in childhood. About 10% of the population avoids vaccination and other needle procedures because of this.

Conversely, minimizing pain during childhood vaccination can help to prevent distress, development of needle fears and subsequent health care avoidance behaviors, such as nonadherence with vaccination schedules. More positive experiences during vaccine injections also maintain and promote trust in health care providers.

In light of the prevalence of pain during vaccine injections and the potential for substantial short-term and long-term adverse sequelae, we identified a need for guidelines to address this important public health issue.[4]

AIMS & OBJECTIVE

To study efficacy of topical anesthetic patch (lidocaine–prilocaine 5%) in reducing pain during DPT combo vaccination.

METHODS

Aims and Objective: To study efficacy of topical anesthetic patch (lidocaine–prilocaine 5%) in reducing pain during DPT combo vaccination.

Methods: 70 patients were given cream (experimental group) and rest were given no patch (control group) by randomized method. Pain was assessed using modified behaviour pain scale for infants at the time of injection and after injection. Pain score was compared between two groups. Data was analysed and categorical tables, unpaired t test was applied.

Results: The post vaccination pain score of the infants shows difference in case and control groups. The average score of pain after vaccination in control group was 7.81±.906 and in cases was 6.50±.697. The use of emla patch pre vaccination leads to reduced pain in infants and a lower pain score after vaccination with p value <0.05.

Conclusion: The use of topical anesthetic patch in healthy infants before vaccination leads to reduction in pain score of infants due to vaccination. Moreover there is increased compliance and follow up of parents for the subsequent visits and vaccination.

OUTCOMES MEASURES

Pain score was assessed in both the groups and compared.

STATISTICAL ANALYSIS

Data analysed and categorical tables, unpaired t test applied. Conclusion drawn from data.

Table 1: the pre vaccination pain score of the infants is almost the same in both case and control groups. The average score of pain before vaccination in control group was 1.63±1.194 and in cases was 1.67±1.224.
Table 2: the post vaccination pain score of the infants shows difference in case and control groups. The average score of pain after vaccination in control group was 7.81±.906 and in cases was 6.50±.697.

<table>
<thead>
<tr>
<th>post-score</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>70</td>
<td>7.81</td>
<td>.906</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>70</td>
<td>6.50</td>
<td>.697</td>
</tr>
</tbody>
</table>

Table 3: depicts that the usage of emla patch produces a highly significant results with p value <0.05.

<table>
<thead>
<tr>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>post-score</td>
<td></td>
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<tr>
<td>Equal variances assumed</td>
<td></td>
</tr>
<tr>
<td>Equal variances not assumed</td>
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DISCUSSION

The DPT combo vaccination is associated with much pain in infants which is stressful to parents also to an extent. This use of topical anaesthetic patch in infants one hour before vaccination can lead to reduced pain in infants post vaccination and increased compliance and follow up of parents, thus improving immunization status.

REFERENCES