Post-Pertussis Vaccination Fever

Supervised by:

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F.I.B.M.S
Pertussis (whooping cough) is one of the most contagious diseases around.

- Caused by a bacterium (Bordetella pertussis).
- Whooping cough makes children cough uncontrollably.
- The cough is often so hard and so persistent that children can't catch their breath, and makes a "whooping" sound when they attempt to breathe in against a larynx severely narrowed by mucus.
Reservoir: Human
Adolescent

Transmission: Respiratory droplets

Communicability: Maximum in catarrhal stage
Secondary attack rate up to 80%
1- Catarrhal stage 1-2 weeks
2- Paroxysmal cough stage 1-6 weeks
3- Convalescence weeks to months
The recommended schedule of DPT vaccination

<table>
<thead>
<tr>
<th>Dose</th>
<th>Age</th>
<th>Minimum Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary 1</td>
<td>2 months</td>
<td>---</td>
</tr>
<tr>
<td>Primary 2</td>
<td>4 months</td>
<td>4 wks</td>
</tr>
<tr>
<td>Primary 3</td>
<td>6 months</td>
<td>4 wks</td>
</tr>
<tr>
<td>Primary 4</td>
<td>15-18 months</td>
<td>6 mos</td>
</tr>
</tbody>
</table>
- Severe allergic reaction to vaccine component or a prior dose.

- Encephalopathy not due to another identifiable cause occurring within 7 days after vaccination.
To determine the side effects of pertussis vaccine, especially the rate of fever appearance after vaccination.

**Objectives:**
Describe study sample according to age of the child, and whether the child received pertussis vaccine and the side effect of the vaccination.
Method:
Period: 3 weeks.
Study population: random sample of children who received the pertussis vaccine or not.
Sample size: 100 child.
Design: randomized cross section.
Setting: Ibn Al-Atheer Teaching Hospital & Ibn Seena Teaching Hospital / Mosul.
# Results of the study:

## Age of the child

<table>
<thead>
<tr>
<th>Age</th>
<th>2-5month</th>
<th>6-12month</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>30</td>
<td>70</td>
<td>100</td>
</tr>
<tr>
<td>%</td>
<td>30</td>
<td>70</td>
<td>100</td>
</tr>
</tbody>
</table>

## Education level of the mother

<table>
<thead>
<tr>
<th>Educ. level</th>
<th>illiterate</th>
<th>primary</th>
<th>Secondary</th>
<th>Higher education</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>17</td>
<td>31</td>
<td>26</td>
<td>26</td>
<td>100</td>
</tr>
<tr>
<td>%</td>
<td>17</td>
<td>31</td>
<td>26</td>
<td>26</td>
<td>100</td>
</tr>
</tbody>
</table>
From the 100 children there were 30 children did not receive full dose because of there age or other causes.
Causes of non-vaccination

- Fever from previous dose 13.4%
- Family history of post-DPT vaccination fever 6.6%
- The child is nursing 13.4%
- Family neglect 26.6%
- Religious believe 40.0%
Child develop fever after vaccination?

After which dose

Yes
- 1st: 92.9%
- 2nd: 7.6%
- 3rd: 1.3%
- 1st & 2nd: 10.1%
- 2nd & 3rd: 1.3%
- 1st & 2nd & 3rd: 32.9%

No
- 7.1%
The time of fever appearance

1st 24 hs 89.9%
25-48 hs 10.1%
After 96 hs 0%
Fever treated by

Antipyretic 84.8%

Cold pads 15.2%
Other side effects were

- Local reaction: 45.9%
- Decreased feeding: 22.4%
- Vomiting: 10.6%
- Crying for >3hs: 7%
- No other S.E.: 14.1%
• Cody et al. in their research in USA reported maximum temperatures to be found 3-6 hours after the injection.

• This was different from the UK finding where the temperatures were greater at 20-24 hours.

• Barkin and Pichichero in another research reported that more than half of DTaP immunized children had an increase in temperature within 48 hours.

• While in this study, 89.9% of the vaccinated children developed fever within the 1st 24 hours.
Fever was most common after the third dose in UK researches.

While in this study the higher percentage (46.8%) developed fever and other complications after the 1st dose.

The percentage of children who did not take the vaccine was 21.4% in this study, this was similar to a study done at Kufa University (محمد محمد محسن وآخرون 2009).
In the same study in UK, regarding other side-effects, 18% of the sample developed local reactions, and in another research done by Cody et al. done at 2012 local reactions were 15%. In this study, 45.9% developed local reactions post vaccination. This deference may be due to the unequality in the sample size.
1. Post vaccination fever is less common after successive doses.
2. Low maternal education is a risk factor.
3. Fever is a common side effect after DTaP vaccination.
4. Fever is most common at the 1st 24 hours.
5. Fever is mainly controlled by supportive measures.
1. Vaccination is essential for disease control as serious side effects are rare.

2. Promote maternal education for better knowledge about vaccination benefits and adverse effects.

3. The early use of supportive measures is important for the control of fever.
WE ARE VERY INDEPTED TO ..... 

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2-Dr. Ali Jasim.  
3-Abn Al Atheer teaching hospital & Abn Seena teaching hospital.
THANK YOU FOR LISTENING