A Survey for Detection of the Urinary Tract Infection by Urine Culture in Younger than Eight Weeks Old Infants Suffering From Ichter in Amiralmomenin Hospital in Zabol City

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Introduction
Jaundice is one of the most common neonatal and infantile diseases [1] and the most common cause of hospitalization in neonates and infants; this disorder occurs in 60% of infants and 80% of preterm infants. It is often physiologic and does not require special action, but it can be a sign of an important disease, and if not treated properly, leads to serious and dangerous complications such as Kernicterus (bilirubin deposition in the brain) that causes lifelong disability [2]. One of the reasons for the increase in serum bilirubin levels is the transfer from fetal to infant phase [3] and the temporary inability of the neonate liver to purify the bilirubin from the blood, because bilirubin is excreted by the pair during the fetal period; however, during the neonatal period, bilirubin is excreted by the liver cells and through the biliary and gastrointestinal tract [4]. Prolonged jaundice refers to cases where it lasts for more than two weeks in term infants and three weeks in preterm infants [5]. Jaundice is divided into two types of direct and indirect [6]. The American Academy of Pediatrics has guidelines for healthy neonates with hyperbilirubinemia, which include determining the maternal and infant blood group, direct conjugated bilirubin. According to the results of independent statistic t-test, the p-value calculated for age at the beginning of jaundice was 0.546 (p-value<0.05), for birth weight 833 (p-value<0.05), for the hemoglobin level was 123.3 (p-value<0.05), for plate count 0.001 (p-value<0.05), for white blood cell count 0.008 (p-value<0.05), for total bilirubin of 0.01 (p-value<0.05) and for direct bilirubin was 0.122 (p-value<0.05). The mean ± SD mean for those who have a positive urine culture is 3.96 ± 1.2/3.9 for the onset age of jaundice, 2.88 ± 0.54 for birth weight, 81.4 ± 2714.16 for white blood cell count, 15.01 ± 2.35 for the hemoglobin level, 302.44 ± 103.41 for platelet, 18.81 ± 3.69 for bilirubin total and 94.4 ± 0.52 for direct bilirubin; The mean ± SD mean for those who have a negative urine culture is 3.91 ± 2.22 for the onset age of jaundice, 2.9 ± 0.51 for birth weight, 805.05 ± 1483.06 for white blood cell count, 14.61 ± 2.77 for hemoglobin level, 280.73 ± 103.44 for plket, 27.34 ± 33.37 for total bilirubin and 0.44 ± 0.49 for direct bilirubin.

Findings
Table 1 analyzes some variables, including jaundice onset age, birth weight, white blood cell count, hemoglobin, plaket, total bilirubin, and direct billirubin. According to the results of independent statistic t-test, the p-value calculated for age at the beginning of jaundice was 0.546 (p-value<0.05), for birth weight 833 (p-value<0.05), for the hemoglobin level was 123.3 (p-value<0.05), for plate count 0.001 (p-value<0.05), for white blood cell count 0.008 (p-value<0.05), for total bilirubin of 0.01 (p-value<0.05) and for direct bilirubin was 0.122 (p-value<0.05). The mean ± SD mean for those who have a positive urine culture is 3.96 ± 1.2/3.9 for the onset age of jaundice, 2.88 ± 0.54 for birth weight, 81.4 ± 2714.16 for white blood cell count, 15.01 ± 2.35 for the hemoglobin level, 302.44 ± 103.41 for platelet, 18.81 ± 3.69 for bilirubin total and 94.4 ± 0.52 for direct bilirubin; The mean ± SD mean for those who have a negative urine culture is 3.91 ± 2.22 for the onset age of jaundice, 2.9 ± 0.51 for birth weight, 805.05 ± 1483.06 for white blood cell count, 14.61 ± 2.77 for hemoglobin level, 280.73 ± 103.44 for plket, 27.34 ± 33.37 for total bilirubin and 0.44 ± 0.49 for direct bilirubin.

Methods
This case-control study done on 100 infants less than eight weeks have been admitted in the zabol Amiralmomenin hospital at the time of 2015. Method of sampling is Convenience (available). Apart from routine testing of infants jaundice, a urine sample was taken for urine analyse and urine culture. After data collection entered them into the software spss18 and using descriptive and inferential statistics in the form of tests conducted to analyze the data (Tables 1-3).

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Findings:
Table 1: Frequency distribution of subjects based on sex.

<table>
<thead>
<tr>
<th>Sex</th>
<th>UTI</th>
<th>Positive</th>
<th>Negative</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girl</td>
<td>Frequency</td>
<td>4</td>
<td>30</td>
<td>0.014</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>11.8</td>
<td>88.2</td>
<td></td>
</tr>
<tr>
<td>Boy</td>
<td>Frequency</td>
<td>23</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>34.8</td>
<td>65.2</td>
<td></td>
</tr>
</tbody>
</table>

[Note: Based on the results of (Table 1-4), according to the Chi-square test, the p-value calculated for gender is 0.014 (p-value <0.05).]

Table 2: The history of jaundice in the family of studies neonates

<table>
<thead>
<tr>
<th>The history of jaundice</th>
<th>Jaundice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Positive</td>
</tr>
<tr>
<td>Positive</td>
<td>Frequency</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
</tr>
<tr>
<td>Negative</td>
<td>Frequency</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
</tr>
</tbody>
</table>

[Note: (Table 2) categorizes subjects in two groups of with and without history of jaundice in the family. Based on the results of the table, 22 neonates had a history of jaundice in their families, and 78 neonates had no history of jaundice in their families.]
There was no significant difference between the two sexes regarding urinary tract infection. In boys, it was slightly more frequent than in girls, but this difference was not statistically significant.

The prevalence of UTI in neonates with prolonged jaundice was 40% in Rooney's study [13]. The prevalence of urinary tract infections in 2-8-week-old infants with jaundice referred to Ali Asghar Zahedan Hospital in Zahedan in 2005, the incidence of urinary tract infection in boys was slightly more frequent than in girls. There was no significant difference between the two sexes regarding the prevalence of urinary tract infection [15]. 34 girls and 66 boys were examined in the present study. The prevalence of urinary tract infection in both sexes was slightly different, with boys being more prone to this disorder (p-value = 0.014); the data in this part of our study is consistent with the research by Beskabadi et al and Nasrin Khales et al. [16].

**Discussion and Conclusion**

Jaundice is one of the most common clinical findings among newborns in the first days of birth. Recognizing the predisposing factors that affect the exacerbation or jaundice can be effective in reducing the severity and control of this disease, as well as controlling the initial problem. One of these factors is UTI, which is a common and serious problem in neonates.

A total number of 100 neonates were examined in the present study. Urine culture was positive in 27 and negative in 73. Fatemeh Eghbalian et al. studied Prolonged Jaundice, examined premature urinary tract infection in Ekbatan Hospital of Hamedan in 2009, according to which 6.6% in neonates turned out to have UTI. The prevalence of UTI in neonates was 6.6% in the present study. The prevalence of urinary tract infections in neonates with jaundice referred to Ali Asghar Zahedan Hospital in Zahedan in 2005, the incidence of urinary tract infection in boys was slightly more frequent than in girls. There was no significant difference between the two sexes regarding the prevalence of urinary tract infection [15]. 34 girls and 66 boys were examined in the present study. The prevalence of urinary tract infection in both sexes was slightly different, with boys being more prone to this disorder (p-value = 0.014); the data in this part of our study is consistent with the research by Beskabadi et al and Nasrin Khales et al. [16].

**Conclusion**

Considering the low prevalence of urinary tract infection in neonates with jaundice, but without other symptoms, it is recommended to conduct urine test in case of prolonged jaundice (lasting for more than two weeks), delayed jaundice, cases without any septic cause of jaundice, serious reduction of bilirubin, weight loss, swelling, and fever; it is also, recommended to conduct another study on infants older than 8 weeks of age and in infants whose jaundice cannot be attributed to any certain cause.

**References**


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