PARENTERAL NUTRITION-ASSOCIATED CHOLESTASIS AS AN EARLY-ONSET ADVERSE EFFECT IN ADULT PATIENTS

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OBJECTIVES

- Parenteral nutrition associated cholestasis (PNAC) is a condition of impaired secretion of bile or frank biliary obstruction that may occur in 25-100% of adult patients receiving long-term parenteral nutrition (PN).
- Objective: to analyze the onset of PNAC in hospitalized adult patients and the possible risk factor associated.

MATERIALS and METHODS

Observational, retrospective and longitudinal → January-2017 to September-2018

Inclusion criteria

- Adult patients
- PN for at least 5 days
- Before starting PN, patients should have normal serum level of:
  - Alkaline phosphatase (AP)
  - Gamma-glutamyl traspeptidase (GGT)
  - Total bilirrubin

Cholestasis definition

- GGT>106.6U/L or
- Total bilirrubin >1.8mg/dl or
- AP(193.5U/L)+GGT or bilirrubin

Primary endpoint:

- Time to the onset of cholestasis

Variable collected

- Gender
- Age
- Sepsis
- Cyclic PN infusion
- Kcal/kg
- Balance dextrosa/fat
- Fat > 1g/kg/d

RESULTS

<table>
<thead>
<tr>
<th></th>
<th>With cholestasis</th>
<th>Without cholestasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>% males</td>
<td>60.0%</td>
<td>72.4%</td>
</tr>
<tr>
<td>Median age</td>
<td>69.5 (IQR=18.3)</td>
<td>69 (IQR=15.3)</td>
</tr>
<tr>
<td>% sepsis</td>
<td>6.6%</td>
<td>13.7%</td>
</tr>
<tr>
<td>% cyclic PN infusion</td>
<td>27.6%</td>
<td>60.0%</td>
</tr>
<tr>
<td>Median Kcal/kg</td>
<td>23.9 (IQR=6.5)</td>
<td>24.9 (IQR=7.6)</td>
</tr>
<tr>
<td>Median balance dextrosa/fat (g/g)</td>
<td>4 (IQR=0.7)</td>
<td>3.6 (IQR=0.7)</td>
</tr>
</tbody>
</table>

Statistical significant differences were only obtained for males (p<0.05) and for cyclic PN (p<0.01).

CONCLUSIONS

- PNAC is an adverse effect that not only happens in patients receiving long-term-PN, but also occurs in a high percentage of hospitalized adult patients receiving PN over the first week.
- In addition, males are associated with an increased likelihood for development PNAC while cyclic PN infusion may be a protector factor for its onset.