Background and importance  The reporting of suspected adverse drug reactions (ADRs) in the National Pharmacovigilance Network (NPN) in our country can be done by different professionals (doctor, lawyer, pharmacist, nurse, health worker, etc) or by the patient themselves. However, historically, the physician is the person that most often intercepts and reports ADRs. The total number of ADRs reported in the NPN in Italy from 1 January 2015 to 31 January 2019 was 198,284, of which only 20,068 (10.10%) were reported by pharmacists.

Aim and objectives  The aim of the study was to verify the impact of the hospital pharmacist on the number of ADR reports when involved in the review of prescriptions in a comprehensive cancer centre.

Material and methods  Data on ADRs reported in our institute between 1 January 2015 and 31 January 2019 were extracted from the NPN and linked to an internal database in Access. The reports were analysed by age, gender, suspect drug, professionals reporting, apparatus involved and type of reaction.

Results  The total number of reports was 600, of which 569 were reported by a hospital pharmacist, 30 by the physician, 1 by a pharmaceutical company and none by patients or nurses. The age range most represented was 46-56 years and 78.5% of were related to female patients. The ADRs reported most often by pharmacists were those affecting the haematopoietic and lymphatic systems (375 reports), followed by gastrointestinal disorders (104 reports) and nervous system disorders (70 reports).

The active ingredients with at least one report were: the first four actives were paclitaxel, cyclophosphamide, carboplatin and epirubicin. The first reaction among the haematopoietic and lymphatic systems (375 reports), followed by gastrointestinal disorders (104 reports) and nervous system disorders (70 reports).

The indicator allowed better identification of the area of underreporting over time in a more precise way than the absolute number of reports. It is feasible, but when the expected frequency of the event decreases to below 10%, the indicator loses reliability for samples <1000 patients. It is therefore mainly a quantitative indicator of frequent events.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.
Material and methods A prospective study (June–September 2019) was carried out. Variables included demographics, duration of PN, indication for PN, type of PI and degree of acceptance. The data were obtained from medical and pharmaceutical nutrition records.

Results Fifty-four patients were registered (71% men, average age 65 years (range 39–87)). The average duration of PN was 11 days (1–39). A total of 176 interventions were recorded (3.3 PIs/patient): 91.5% during follow-up and 8.5% after finishing PN. Distribution of PIs according to diagnosis were: polyvalent critical patients (48.1%); postoperative complications (29.6%); colorectal surgery (9.2%); upper gastrointestinal tract surgery (5.7%); pancreatitis (3.7%); and liver diseases (3.7%). According to the type of PI: 36.6% were related to a change in the composition of macronutrients, and 61% of these PIs were related to proteins (78%—increase in order to cover the nitrogen requirements), 23.7% were related to lipids (71%—restriction due to triglycerides >400) and 15.3% were related with carbohydrates (100%—decrease in the supply due to high levels of glycaemia); 31.7% were related to a change in the amount of electrolytes (53%—extra supply; 47%—restriction), with phosphorus being the electrolyte which generated the highest number of PIs (45%); 18.6% were related to addition of insulin in the PN; 10.6% were related to a request for a nutritional profile; and 2.5% were related to cycling of PN due to cholestasis. Most of the PIs (88.7%) were accepted by physicians.

Conclusion and relevance The majority of interventions were due to changes in the composition of macronutrients and micronutrients of the PN, adjusting to the constant changes in the needs of critically ill patients. The high number of PIs per patient and the high degree of acceptance by physicians highlight the significant role of the hospital pharmacist in the nutritional control of critically ill patients.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

Abstract 4CPS-196 Table 1

<table>
<thead>
<tr>
<th>Sample (100 mL)</th>
<th>Nitrogen (g/L)</th>
<th>Glucose (g/L)</th>
<th>Lipids (g/L)</th>
<th>Sodium (mmol/L)</th>
<th>Potassium (mmol/L)</th>
<th>Magnesium (mmol/L)</th>
<th>Calcium (mmol/L)</th>
<th>Phosphorus (mmol/L)</th>
<th>CAN (mmol/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PN1</td>
<td>3.7</td>
<td>92.6</td>
<td>17.5</td>
<td>40.0</td>
<td>30.0</td>
<td>3.0</td>
<td>20.0</td>
<td>20.0</td>
<td>1542</td>
</tr>
<tr>
<td>PN2</td>
<td>4.2</td>
<td>106.8</td>
<td>21.6</td>
<td>40.0</td>
<td>30.0</td>
<td>3.0</td>
<td>20.0</td>
<td>20.0</td>
<td>1542</td>
</tr>
<tr>
<td>PN3</td>
<td>4.7</td>
<td>121.0</td>
<td>25.8</td>
<td>50.0</td>
<td>35.0</td>
<td>3.5</td>
<td>22.5</td>
<td>25.0</td>
<td>1749</td>
</tr>
<tr>
<td>PN4</td>
<td>5.2</td>
<td>135.2</td>
<td>29.9</td>
<td>60.0</td>
<td>40.0</td>
<td>4.0</td>
<td>25.0</td>
<td>30.0</td>
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</tr>
</tbody>
</table>

4CPS-196 STABILITY OF LIPID EMULSION IN PAEDIATRIC PARENTERAL NUTRITION WITH HIGH ELECTROLYTIC LOAD

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Background and importance Ternary mixtures in parenteral nutrition (PN) have a complex composition and so interactions between components can lead to instability, compromising safety. Fat globules >5 μm can cause thromboembolisms. Critical aggregation number (CAN) is used to predict stability (calculated with cation concentration).

Aim and objectives To analyse the stability of the lipid emulsion in PN samples with a high CAN using globule size measurements, and to evaluate the influence of temperature and time on emulsion stability.

Material and methods We studied four samples according to the nutritional requirements of a 1 kg neonate during the first days of life. Micronutrient amounts were greater than those recommended, and vitamins and zinc were also added. Samples were prepared in duplicate.

Globule size was measured by laser diffraction (Beckman Coulter LS-I3-320) on the preparation day (day 0) and after 7 days. The samples were stored under refrigerated conditions and at room temperature, CAN was calculated based on the concentrations of cations present in each PN. Statistical analysis was performed using the Student’s t test (statistical significance p<0.05).

Results PN composition is shown in table 1 and average globule size (μm) is shown in table 2.

There were no significant differences between measurements on day 0 and day 7 on samples stored at room temperature or in a refrigerator (p=0.896 and p=0.171, respectively).

Conclusion and relevance Average globule size was stable despite a high CAN of samples, but more sensitive analytical techniques may be necessary to detect changes in the fraction of large globules. The study time and different storage temperature did not influence the average globule size of our samples. To establish the overall stability of the PN, more complete studies should be carried out, analysing more stability dependent processes.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.