Background and importance The control of pain and sedation is a challenge in the neonatal intensive care unit (NICU). Traditionally, opioids and benzodiazepines have been the most commonly used, but they have side effects. Dexmedetomidine, an alpha adrenergic agonist with a sedative and analgesic effect, could be an alternative in neonates (off-label use) because it offers advantages such as the absence of gastrointestinal effects and depression of the respiratory centre. Its pharmacokinetic profile appears to be different in neonates compared with older children and adults, exhibiting a longer half-life and a larger AUC, indicating that lower doses may be required.

Aim and objectives To analyse the effectiveness and safety of dexmedetomidine in neonates.

Material and methods A retrospective observational study was conducted in neonates admitted to a level III NICU and treated with dexmedetomidine perfusion over ≥ 24 hours between July 2017 and September 2018.

Results Thirty-one patients were analysed, 35% female. Median gestational age was 25 weeks (IQR 25–27), 74% were <32 weeks. The initial dose was 0.3 mg/kg/hour (IQR 0.2–0.4) and the maximum dose was 0.8 mg/kg/hour (IQR 0.7–1). The initial loading bolus dose was administered to four patients and two of them presented bradycardia that required atropine treatment. Treatment duration was 178 hours (IQR 96–255), 11 patients were extubated during the infusion and no reintubation was needed in the following 72 hours. Comparisons between heart rate (HR), systolic blood pressure (SBP) and diastolic blood pressure (DBP) before and after starting dexmedetomidine are shown in table 1. The most used concomitant sedoanalgesic medication was fentanyl (29 patients, 93.5%). Fentanyl dose was reduced in the first 24 hours from the start of dexmedetomidine treatment in 16 patients (55%).

Conclusion and relevance Dexmedetomidine is an innovative option to manage sedation. Our experience showed that its administration as a perfusion was safe (reduction in HR and DBP were statistically significant but without clinical impact). However, cautious is needed with bolus administration. Also, extubation was possible during its administration without impact on respiratory activity level. It had better sedoanalgesic effects with the possibility of lowering the dose of concomitant drugs.

REFERENCES AND/OR ACKNOWLEDGEMENTS None.

No conflict of interest.

Abstract 4CPS-136 Table 1

<table>
<thead>
<tr>
<th>Variable (mean (SD))</th>
<th>12 hours pre</th>
<th>24 hours post</th>
<th>P value (Student’s t test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR (bpm)</td>
<td>166 (17)</td>
<td>152 (14)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>SBP (mm Hg)</td>
<td>63 (12)</td>
<td>60 (10)</td>
<td>0.09</td>
</tr>
<tr>
<td>DBP (mm Hg)</td>
<td>37 (10)</td>
<td>33 (8)</td>
<td>0.03</td>
</tr>
</tbody>
</table>

For each of those 8 contraindications, a pharmacist intervention was redacted to stop the highly torsadogen drug prescription. Seven were accepted and followed and one was partially accepted. Of the total prescriptions, 11% contained drugs that might induce bradycardia and 53% contained drugs that might induce hypokalaemia. However, among 28 prescriptions containing escitalopram with 2 CI, 10 prescriptions containing hydroxyzine with 2 CI and 5 prescriptions containing domperidone with 4 CI.

Conclusion and relevance Prescribers may not know enough about the torsadogen risks of escitalopram, hydroxyzine and domperidone, with 80% of these prescriptions containing CI. The pharmacy intervention helped to avoid those 8 CI. This work reminds us to be vigilant about torsadogen drugs, providing many interactions. We regularly inform prescribers about drugs inducing QT prolongation, hypokalaemia or bradycardia to improve prescriptions.

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No conflict of interest.