4CPS-136 DEXMEDETOMIDINE TREATMENT FOR THE SEDATION OF PRETERM NEONATES

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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%).

Abstract 4CPS-136 Table 1

	12 hours pre	24 hours post	P value (Student's t test)
Variable (mean (SD))			
HR (bpm)	166 (17)	152 (14)	<0.01
SBP (mm Hg)	63 (12)	60 (10)	0.09
DBP (mm Hg)	37 (10)	33 (8)	0.03

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.

4CPS-137 REVIEW OF 3 MONTH PRESCRIPTIONS CONTAINING DRUGS INDUCING QT PROLONGATION AND TORSADE DE POINTE

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Background and importance In our psychiatric hospital, it is common to prescribe psychotropic medications such as neuroleptics. One side effect of this drug class is to induce QT prolongation. The more torsadogen drugs we prescribe, the more rhythmic cardiac disease, such as torsade de pointe, may occur. Our hospital drug formulary contains three highly torsadogen drugs: escitalopram, hydroxyzine and domperidone. They must be avoided in situations that may increase the risk of torsades de pointes, such as hypokalaemia, bradycardia and other drugs that induce QT prolongation.

Aim and objectives To analyse prescriptions containing at least one of three highly torsadogen drugs and detect torsadogen risk situations.

Material and methods We retrospectively analysed all prescriptions over 3 months containing at least one of our three highly torsadogen drugs. We also had access to biological results and bradycardia was mentioned in the patient medical file. For each prescription of one of these three drugs, we checked that no other torsadogen drugs was prescribed, and that there was no bradycardia or hypokalaemia.

Results During our study period, among all 584 prescriptions, we found 28 containing at least one of our three highly torsadogen drugs, including 8 contraindications (CI) due to co-prescription with other torsadogen drugs: 13 prescriptions containing escitalopram with 2 CI, 10 prescriptions containing hydroxyzine with 2 CI and 5 prescriptions containing domperidone with 4 CI.

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 our three highly torsadogen drugs, bradycardia and hypokalaemia were not found.

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.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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