AN AUDIT OF THE COMPATIBILITY OF DRUG ADMIXTURES USED FOR SYRINGE DRIVERS IN PAEDIATRIC PALLIATIVE CARE

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Aim The aims, through analysis of patient symptom management plans (SMPs), were:

- ▶ Examine the availability of information regarding syringe driver use from patient records within the palliative care database
- ▶ Audit and assess the most commonly prescribed drug combinations
- ▶ Investigate data supporting the compatibility of the most frequently prescribed drug combinations
- ▶ Inform the methodology for future stability work

Method For this retrospective study, patients were identified through searching the palliative patient database and analysis of SMPs. Patients who received medications via a syringe driver at least once during end of life care, between Jan 2011 and Dec 2013 were included. The drugs and doses prescribed were documented. Diluents and volumes used were more difficult to ascertain and respective community nursing teams and hospices were contacted to retrieve this data. Data was inputted and analysed using Microsoft Excel. Available data supporting the compatibility and stability of the drug combination(s) were assessed using databases including the Syringe Driver Survey Database (SDSD),¹ Trissel's Handbook on Injectable Drugs² and the Stabilis.³

Results Forty-five patients received medications via a syringe driver. The information within the SMPs was brief and diluents and final volumes were not available. Responses from the community care nurses were inconsistent in regards to volumes and diluents used; final volumes for dilutions could only be obtained

for six of 45 of the patients. Feedback from nurses suggested that more detailed preparation information should be provided by the tertiary centre. Overall 38% of patients were prescribed a three drug combination, 24% of patients received four drug combinations and 22% a combination of two drugs. The most frequent two and three drug combinations were morphine-midazolam (60%) and morphine-midazolam-cyclizine (35%). A total of 65 entries were found on the SDSD for the morphine-midazolam combination¹ and six for the morphine-midazolam-cyclizine combination. All of the entries were observational data and had "appeared compatible". Laboratory data could only be found for the morphine-midazolam combination; demonstrating visual and physical compatibility.⁴ With the objective of investigating the compatibility and stability of the morphine-midazolam-cyclizine combination, a full factorial approach was taken proposing a brief summary for an experimental design to be used for future laboratory experiments.

Conclusion There is a lack of laboratory data supporting the compatibility and stability of drug combinations currently used in syringe drivers in paediatric palliative care. In order to ensure consistent and better quality information, more detailed instructions on syringe driver preparation should be included in the SMPs.

REFERENCES

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