To continue monthly prescribing audits and to continue to share good practice amongst neonatal prescribers.

P35 USING ORAL MESNA AND HYDRATION FOR PAEDIATRIC PATIENTS HAVING IFOSFAMIDE OR CYCLOPHOSPHAMIDE

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Aim The anti-cancer agents ifosfamide and cyclophosphamide are used commonly in the treatment of childhood cancers, across many regimens. The high doses used can sometimes precipitate haemorrhagic cystitis which is a dose limiting toxicity caused by the metabolic breakdown products acrolein and 4-hydroxyifosfamide. Worldwide, mesna (sodium-2-mercatpoethane suplhonate) combined with hydration is used to prevent, and treat, accumulation of these metabolites causing haemorrhagic cystitis.[1 2]

The fluids and mesna are continued for 12 to 24 hours after the chemotherapy stops meaning patients have a prolonged inpatient stay to provide hydration and mesna to help excrete these metabolites from the body.

To shorten the length of time in hospital it may be appropriate to stop intravenous mesna and fluids early in some children and allow patients to drink and have mesna by mouth at home. For this to occur the patient needs to be able to drink the required volume of fluid that would have been given intravenously and can take oral mesna, either be dissolving it or by swallowing a tablet.

Method If a child is eligible, 40% of the 24-hour dose of ifosfamide or cyclophosphamide is given as an intravenous bolus pre AND post the administration of the final day of either cyclophosphamide or ifosfamide. The same dose will then be given in oral form and taken 2 hours and 6 hours after the end of the chemotherapy infusion. Mesna tablets come in 400 mg and 600 mg strengths. They are scored, which may help with dosing and can be dissolved in 100 ml of water which takes about 20 minutes. They can also be crushed if required. Any dissolved Mesna should be taken immediately; the drug can be given via an NG tube. Should the child be sick in the hour following administration, the dose should be repeated.[1 2]

Results So far three patients have taken part in this new regimen, both were successfully discharged home earlier than normal saving 18 hours inpatient time each. There were no adverse effects noted. Although it is recognised that the volume of water needing to be consumed is large and may be a limitation for some patients.

Conclusion As this new regimen is used more frequently the length of stay for patients being prescribed cyclophosphamide or ifosfamide will be reduced significantly. This will allow for more time at home, and in the longer term this may also reduce inpatient bed pressure on the ward.

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P36 SHOULD DISCHARGE PRESCRIPTIONS BE PRE-SCREENED BY PHARMACY TECHNICIANS IN A TERTIARY PAEDIATRIC HOSPITAL?

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Aim To assess the utility of pharmacy technician pre-screening of discharge prescriptions by reviewing the number of straightforward formulation and dosing changes made during the pharmacist led screening process.

Method A retrospective audit of prescriptions dispensed over a one month period covering Acute Receiving (ARU) and Clinical Decision Units (CDU) in a tertiary paediatric hospital. All completed electronic discharge prescriptions (i.e. screened by a pharmacist and dispensed) were compared with the original electronic prescription completed by the prescriber. Two factors were assessed: changes to formulation (e.g. changing to a preferred strength of liquid), and simple changes to dosing instructions (e.g. adding maximum frequencies or changing to standardised instructions).

Results ARU dispensed 400 items from 142 prescriptions. 163 items were modified (41%) during pharmacist screening. 85 prescriptions (59%) required modification (between 1 and 6 changes per prescription). 62 changes were to formulation (38%) and 101 (62%) were to dosing instructions.

CDU dispensed 199 items from 77 prescriptions. 70 items were modified (35%) during pharmacist screening. 41 prescriptions (53%) required modification (between 1 and 4 changes per prescription). 20 changes were to formulation (29%) and 50 (71%) were to dosing instructions.

Conclusion Medication errors in children are associated with significant harm.[1] Lack of appropriate formulations or choice of incorrect formulation on a discharge prescription can lead to potentially fatal incidents.[2]

Our audit found that more than half of all prescriptions dispensed during a one month period from one dispensing room in a paediatric hospital required simple modification before dispensing. These modifications do not have to be carried out by a pharmacist. Experienced paediatric pharmacy technicians have the knowledge base to make these adjustments.[3] Electronic prescribing allows technicians to make password-protected alterations to prescriptions.

Utilising pharmacy technicians to carry out pre-screening of discharge prescriptions could release pharmacist time, and allow for development of clinical services. There is no clinical pharmacy service provided to either of these clinical areas at present.

The results from the two clinical areas audited are similar, suggesting that the results could apply across other acute care areas within the hospital, although further work would be needed to determine this. An audit would be required after implementation of pre-screening to assess how much pharmacist time (if any) is saved by the pre-screening process.

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