ADHERENCE TO LOCAL PHARMACOTHERAPY MANAGEMENT GUIDELINES ON PRESCRIBING OF INTRAVENOUS CYCLOPHOSPHAMIDE IN VASCULITIS PATIENTS

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INTRODUCTION

If left untreated, vasculitis can result in severe multi-organ damage leading to untimely patients' death. Intravenous (IV) cyclophosphamide is an essential drug in the pharmacotherapy management of any type of vasculitis resulting in improved patient outcomes. A shared care guideline (SCG) on the prescribing of IV cyclophosphamide is in use at Mater Dei Hospital. This guideline helps clinicians, pharmacists and nurses to work together as a team towards effective patient safety.

AIMS

- To assess the clinical adherence to the shared care guideline on the pharmacotherapy management of intravenous cyclophosphamide in vasculitis patients.
- To identify gaps in adherence against the shared care guideline

METHOD

Patients who were prescribed IV cyclophosphamide for vasculitis between 2010 and 2014 were identified through the electronic database kept by the clinical pharmacist. The individual pharmaceutical care patient profiles were retrospectively analysed in order to assess the adherence of each patient's pharmacotherapy against the local pharmacotherapy management shared care guideline for IV cyclophosphamide.

RESULTS

- A total of 18 patients were prescribed IV cyclophosphamide for vasculitis between 2010 and 2014. Out of these, 1 patient refused to take the treatment because of its potential side effects and another patient passed away prior to initiation of therapy.
- Out of a total of 16 patients who agreed to their prescribed therapy, 8 were not prescribed IV cyclophosphamide at the recommended dose regimen frequency but were prescribed IV cyclophosphamide at an interval of once a month for a total of 6 months.
- A total of 4 patients did not have their IV dose prescribed at the recommended dose but were given a standard dose of 1 g.
- Mesna, ondansetron and co-trimoxazole were prescribed in all patients and antifungal prophylaxis was not prescribed in any patient.
- Routine laboratory monitoring was carried out in all patients in accordance to the SCG.
- Only 6 patients were recommended the pneumococcal vaccine out of whom of only 2 bought the vaccine. Influenza vaccine was always recommended.

Extracts from Mater Dei Hospital Shared Care Guideline

Recommended dosage regimen

Dose is administered every 2 weeks for 3 times and thereafter every 3 weeks for a total of 6 months.

Recommended dose calculation

Age	Creatinine 150—300 µ/mmol/L	Creatinine 300 — 500 µ/mmol/L
< 60	15 mg/kg	12.5 mg/kg
60 - 70	12.5 mg/kg	10 mg/kg
> 70	10 mg/kg	7.5 mg/kg

Recommended co-medications on day of IV administration

- Mesna at a dose of 200 mg at t=0 hrs (before IV cyclophosphamide); at t=2 hrs and t=6 hrs respectively.
- Ondansetron (anti-emetic) 8 mg iv stat and then orally three times daily for 24 hrs post IV cyclophosphamide.

Recommended routine laboratory investigations

Complete blood count, renal function to be taken at least 3 days prior to each IV dose.

Other recommendations

- Co-trimoxazole prescribed at a dose of 960 mg three times a week for a total of at least 6 months for prophylaxis of *Pneumocystitis carinii.*
- Anti-fungal prophylaxis to be considered.
- Influenza and pneumococcal vaccines are recommended.

CONCLUSION

There is yet room for improvement towards adherence with the local SCG for prescribing of IV cyclophosphamide in vasculitis. The importance of SCG in optimising the management of patient's health should be recognised and any deviations should be well documented. Pharmacists are in an ideal position to work within a multidisciplinary team to continuously ensure patient safety and effective prescribing by identifying gaps in adherence to recommended guidelines.