

Introduction

Prescription errors represent a pervasive problem found across many hospitals and the ubiquity by which antipyretics are prescribed in paediatrics makes them a frequent source of error. Such avoidable errors not only lead to actual physical harm for the child, but also incur financial and legal costs on the service provider, dampen public confidence in the health care system and predispose to negative psychological effects on both the patient and prescriber.

Objectives

Prescriptions of Paracetamol for paediatric inpatients at Mater Dei Hospital, a national acute and teaching hospital in Malta, were analysed for sources of error. The British National Formulary for Children (BNFC) was used to establish the correct prescribing standard.

Methods

Treatment charts of all admissions to medical paediatric inpatient wards were reviewed daily over a four-week period. Prescriptions for Paracetamol were assessed for legibility, inedibility, approved drug nomenclature, correct dose and dosing frequency, approved dosing interval abbreviations, writing of minimum dosing interval for pro re nata (PRN), appropriate dating, prescriber signature and prescriber designation. Treatment charts were also analysed to assess accurate writing of patient name, identification number, age, date of birth, height, weight, and allergies. Paracetamol prescriptions for indications other than fever were excluded.

Conclusion

Adherence to proper prescription practices has been repeatedly emphasised by regulatory bodies and safe prescription is considered an integral part of sound medical practice. Greater attention needs to be paid to appropriate dosing according to indication and route to prevent overdosing. Correct writing of dosing interval abbreviations, as well as recording of weight and allergies in treatment charts is also essential.

Results

A total of 72 treatment charts were analysed of which 44 contained Paracetamol prescriptions. Age ranged from 1 day to 13 years. 93.2% of all prescriptions were on a PRN basis. Legibility and inedibility met the BNFC standard in 100% of cases. Approved drug nomenclature was used in 97.7% of prescriptions.

With regards to dosing, 54.5% of prescriptions did not follow the standard leading to incorrect dosing. Of these cases, 50% were due to the same dose of Paracetamol being prescribed for the oral, intravenous and rectal routes used for the same child. In the other 50%, the oral dose was calculated by weight instead of using fixed dose ranges based on age. Where errors were made, patients were overdosed by an average of 20% more than the recommended maximum dose. Correct dosing frequency was present in 100% of cases. 97.7% of dosing interval abbreviations were not according to guidelines, mainly because English abbreviations were not written in full. PRN was not written in 51.2% of Paracetamol PRN prescriptions.

Dating was correct in 95.5% of cases. Prescriber signature present in 97.7% of cases and prescriber designation in 95.5% of prescriptions.

The following table illustrates data related to treatment charts:

Patient Criteria	Percentage Correctly Completed
Name	94.4
Identification Number	94.4
Age	83.3
Birth date	22.2
Height	1.4
Weight	76.4
Allergies	54.2