



OUTPATIENT PARENTERAL ANTIMICROBIAL THERAPY (OPAT) WORKING GROUP IN A HOSPITAL AT HOME (HaH) UNIT: THE ESSENTIAL ROLE OF PHARMACISTS

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BACKGROUND and IMPORTANCE

OPAT has significantly increased since the implementation in 2015 of HaH unit. This increase was largely due to the versatility of one daily OPAT administration, advances in vascular access and infusion devices, high acceptance by patients and healthcare professionals. Proving also decreased cost, safety and efficacy in a large number of infectious diseases.¹

In 2018, an OPAT working group at HaH unit was formed to optimize intravenous antimicrobial (IA) therapy, developing therapeutic protocols, and improving OPAT administration procedures at the patient's home.

AIM and OBJECTIVES

Assessing the importance of integrating a pharmacist into the HaH OPAT working group to optimize parenteral antimicrobial therapy.

MATERIAL and METHODS

Bibliographic review and analysis of summary of products characteristics of IA therapy existing in the hospital to evaluate the properties, dosage, dose, administration routes and stability after reconstitution and/or dilution.

Assessment of patients profile treated with OPAT at the HaH during the first semester of 2017 and identification of the main differences compared to patients admitted to the conventional medicine service who refused to be admitted to the HaH during the same period.

RESULTS

The literature review allowed the elaboration of a summary table with the most relevant information: reconstitution, dilution, stability, administration routes, incompatibilities, interactions and alerts.

Table 1 – Example of relevant information collected for the stability of parenteral antimicrobial therapy used at Hospital Garcia de Orta

Antibiotic	Brand	Reconstitution	Dilution	Administration	Stability	Incompatibility	Warnings	CADD® Ambulatory Infusion Systems	Elastomeric pump
Amphotericin B 50 mg (Fungizone)	BMS United Kingdom	10 mL WFI	5% Glucose with pH more than 4,2.	Test dose =10 mL of solution (=1mg) during 20 - 30 minutes. Higher dosages (0,3mg/kg) 2 a 6 hours perfusions	8h room temperature and 24h in the refrigerator	Saline solution (causes precipitation)	Use membrane filter lower than 1µm	No data available	Stability of 10 days kept in the refrigerator (2°C to 8°C)
	SPC 11-2016				Aseptic reconstitution 24h room temp. and 1 week in the refrigerator				
	Special Use Authorization								

In April 2018, HaH therapeutic protocols were implemented according to IA selection and administration routes, as well as the use of programmable infusion devices that allow continuous or intermittent infusion according to the stability of each IA.

An assessment was made 6 months after the implementation of these measures demonstrating that the use of 3rd generation cephalosporins have been successfully substituted to 2nd generation in 30% of patients.

2017		2018	
01/April-31/October	HaH unit	01/April-31/October	HaH unit
Ceftriaxone	46,5%	Ceftriaxone	18,3%
Days of antibiotherapy	7,6	Days of antibiotherapy	7,9
Patients	N = 269	Patients	N = 356
		01/April-31/October	HaH unit
		Cefuroxima	13,2%
		Days of antibiotherapy	6,1
		Patients	N = 356

Implementation of Therapeutic Protocols

CONCLUSION and RELEVANCE

The literature review contributed to optimize the selection and use of IA promoting its rational use, a fact proven by the decrease of 3rd generation cephalosporins use. Study of the administration routes and stability after reconstitution and/or dilution allows minimization of adverse effects. Therefore, the integration of a pharmacist into the HaH OPAT working group contributed to increase the effectiveness of OPAT and patient safety.

REFERENCES

1 - Chung, E et al. 2016. Development and Implementation of a Pharmacist-managed OPAT Program. Scholarship and Professional Work. 229.