

SHORTAGE OF DRUGS ERA: IMPACT OF PIPERACILIN/TAZOBACTAM SHORTAGE

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Background



In Spain, in the last six months there has been a mean of 0.9 shortages per day.

Foreign's defined daily dose (DDD) cost 2 times more than the one of the national product.

2018



Piperacilin/tazobactam shortage was announced at **April 2018** by the Spanish Agency of Medicine and Health Products (AEMPS)



In **May 2018** the AEMPS offered it as foreign drug to Spanish hospitals but it finished quickly.



After that no alternative was available until **July 2018** when the AEMPS offered it again as foreign drug.



At the end of June the hospital ran out of stock until the end of **September** when the national product was restored.

On the other hand, since April 2014, an Antimicrobial Stewardship Programme (ASP) has been implemented in hospitalization units (HU) of this hospital. One of this programme purposes is to work on rational use of carbapenems.

Carbapenems DDDs 100 bed-days 2016 HU	Carbapenems DDDs 100 bed-days 2017 HU
6,89	6,93

Purpose

The aim of this study is to analyze carbapenems exposure during piperacilin/tazobactam shortage in a tertiary care hospital

Material and methods

Carbapenems exposure was measured by DDDs/100 bed-days three months before (April, May and June) and three months during the shortage (July, August and September), and furthermore expense variation was calculated. Carbapenems consumption, at HU and intensive care unit (ICU), was calculated

Results

Carbapenems	DDD (g)	Cost DDD (€)	DDDs/100 Bed-days HU before shortage	DDDs/100 Bed-days HU during shortage	DDDs/100 bed-days ICU Before shortage	DDDs/100 Bed-days ICU during shortage
Meropenem	2	12,5	2,96	7,48	7,72	16,87
Imipenem	2	12	1,77	2,18	0,75	1,69
Ertapenem	1	36	1,45	2,25	0	2,03
Total			6,18	11,9	8,47	20,59

During the shortage carbapenem DDDs/100 bed-days increased by 92% for HU and by 143% for ICU. These carbapenem DDDs/100 bed-days rise came with an additional cost of 5300€.

Conclusion

These data show the huge impact of piperacilin/tazobactam shortage in public health and economic resources. The management of shortages should be a public health priority for European health authorities. Also this situation makes difficult to get Antimicrobial Stewardship Programme purposes. Ecological impact must be evaluated after this excessive carbapenems use.

