ANTIMICROBIAL STEWARDSHIP TEAM: MANAGEMENT OF PIPERACILIN / TAZOBACTAM SUPPLY SHORTAGE.

E. SÁNCHEZ YAÑEZ[1], E. NUÑO ALVAREZ[2], Y. DOMINGUEZ RIVAS[1], C. ESTAUN MARTINEZ[1], M. PEDROSA RUIZ[1]. JM FERNANDEZ-OVIES[1]

1 HOSPITAL UNIVERSITARIO VIRGEN DE LA VICTORIA, PHARMACY, MÁLAGA, SPAIN.
2 HOSPITAL UNIVERSITARIO VIRGEN DE LA VICTORIA, INFECTIOUS DISEASES SPECIALISTS, MÁLAGA, SPAIN.

Background: June 14, 2017, the Spanish Agency for Medicines and Health Products (AEMPS) reports problems with the supply of Piperacillin / tazobactam (PT). The AEMPS gave general recommendations for tackling this problem and reported that the Antimicrobial Stewardship Team (AST) of each hospital should elaborate a protocol adapted to its center. The AST should implement and monitor compliance with the protocol.

Purpose: 1- Describe the interventions made by the AST during the PT shortage. 2- Show the impact of the measures.

Material and methods: Prospective intervention study comparing antibiotic consumption during P/T shortages (7/July/2017 – 16/August/2017) with an equivalent period of time in which P/T was available. Antibiotic consumption data (DDD- Defined Daily Dose) were obtained from the Farmatools-Dominion® computer application.

Results: The AST made the following interventions:
1- Active intervention: Creation of a document adapted to our hospital, incorporating local microbiology and resistance patterns. The document includes some general norms and the alternatives to PT for the empirical treatment and for the directed treatment. The paper aims to minimize the overuse of carbapenems. This prioritizes other alternatives whenever possible.
2- Education: Dissemination of this document:
- Information sessions with the units that consume PT the most (ICU, Surgery, Internal Medicine, Emergency). The sessions were given by an infectious diseases physician and a clinical pharmacist.
- The document was available to the entire hospital through the hospital's site and electronic medical record.
3- Alert in the application of electronic prescriptions when a doctor prescribed PT. The alert sent the prescriber to the document elaborated by the AST.

Impact of measures (on antibiotic consumption):
Antibiotic consumption data during the period of shortage (7/July/2017 – 16/August/2017) vs data on antibiotic consumption during the same period of the previous year.
DDD PT: 175 vs 1205 (-85,4%)
DDD Carbapenem (imipenem, meropenem) 1314 vs 981 (+33%)
DDD Ceftazidima 395 vs 110 (+259,09%)
DDD Cefepima 339 vs 111 (+205,40%)
DDD ceftriaxona 1604 vs 1026 (+56%)

Conclusion: AST implemented measures aimed at facilitating daily clinical practice and avoiding the misuse of antibiotics (excessive use of carbapenems). The measures were educational and incorporated active intervention.
A dramatic decrease in PT consumption was achieved. Carbapenems was the group with the lowest percentage elevation compared to other antibiotics.