

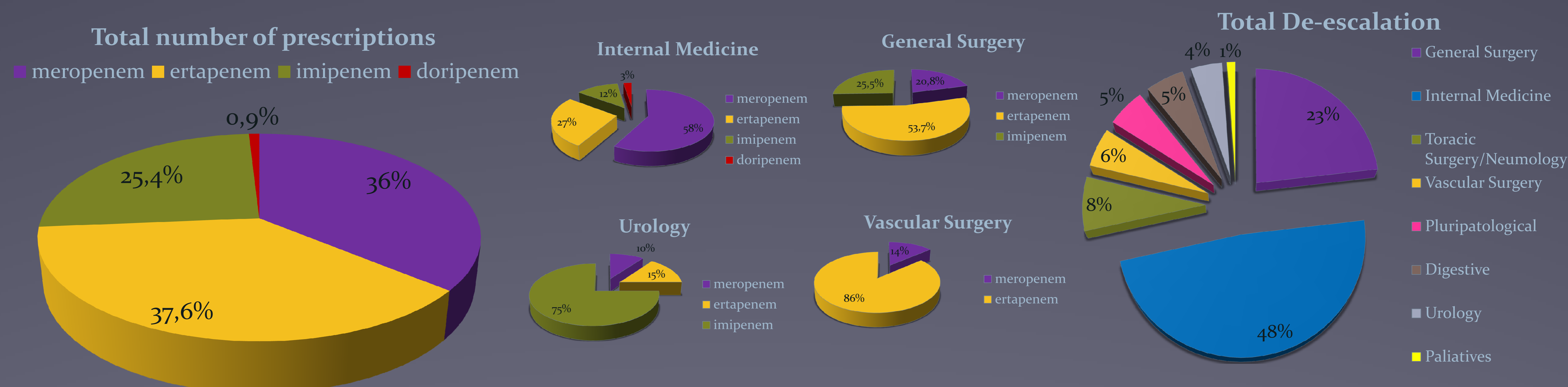
"De-escalation strategy of empirical antibiotic treatment with carbapenems"

Sadyrbaeva S., Aznarte Padial P., El-Fahimi N., Madrid Paredes A., Puerta García E., Callejas Hernández M.A. University Hospital Virgen de las Nieves, Granada, Spain.

BACKGROUND: The therapeutic de-escalation in allows the improvement of the effectiveness of empirical antimicrobial therapy and avoids the development of resistance

PURPOSE: Analyze the preliminary results of a pilot project of pharmacy interventions to achieve de-escalation of treatment with carbapenems, within a program for optimisation of antibiotics use.

MATERIALS AND METHODS: Prospective study of pharmacy interventions aimed to propose de-escalation in patients starting treatment with carbapenems, over three months (from March to June 2012) in a tertiary hospital, based on available microbiology results. The de-escalation proposal was made through the electronic prescribing software. The variables analyzed were: number of patients prescribed carbapenems, prescribing speciality, request of cultures, isolated microorganisms and interventions performed. The de-escalations carried out without pharmacy intervention were also assessed.



RESULTS: Total number of prescriptions was 433. The most prescribed carbapenem was Ertapenem (37.6%) followed by Meropenem (36%). The carbapenem most used in Internal Medicine was Meropenem (58.2%) and Imipenem in Urology (75%). Ertapenem was used more frequently in General Surgery (53.7%) and Vascular Surgery (86.0%). Out of total of 316 requested tests, 172 (54.4%) were positive. The most common isolated pathogen was *Escherichia Coli* (24.7%) being 20.8% of them Extended-Spectrum Beta-Lactamase (ESBL)-producing, being 60% sensitive to piperacillin-tazobactam or fosfomicin. *Klebsiella* spp. was isolated in 3.6%, where 33.3% were ESBL-producing and 50% were sensible to piperacillin-tazobactam. Total treatments subject to de-escalation was 96 (55.8%), out of 172 showing this possibility, where 74 (77.1%) were carried out by initiatives of medical teams and 22 (22.9%) after pharmacy interventions. The Services with higher degree of acceptance of pharmacy interventions were Internal Medicine (36.4%) and General Surgery (27.3%).

CONCLUSIONS: Although the therapeutic de-escalation of empirical treatments with carbapenems was performed in low percentage; pharmacy interventions achieved an increase of this practice being the more receptive Specialties Internal Medicine and General Surgery.