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Paper Poster Session

Education and competencies in antimicrobial stewardship

How routine bedside IDS consultation improves antibiotic stewardship in the era of antimicrobial resistance: a pilot study

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Background: Infectious Diseases Specialist (IDS) have highly improved the outcome of patients with severe infections. Bedside IDS approach was found to be more optimal regarding antimicrobial treatment than informal interventions. The current pilot study aims to assess the quality of bedside IDS routine consultation in a University Hospital with high epidemiological rates of antimicrobial resistance.

Material/methods: We retrospectively analyzed last 6-month data on IDS everyday consultations in medical and surgical departments of a 700-bed University General Hospital in Athens, Greece. All consultations were provided at bedside by a dedicated experienced team of IDS. We analyzed each patient as one consultation irrespective of the number of follow up visits of the IDS group. Data on the patients' demographics, site and microbiological documentation of infections, the presence of an impregnated device and blood/urine catheters were recorded. Diagnosis and treatment of infections

followed national guidelines. The burden of discontinuation, escalation and de-escalation of antibiotics following the IDS consultation was assessed. Chi-square and Mann Whitney test were applied for categorical and continuous variables. Logistic regression analysis was performed for factors potentially associated with de-escalation of antibiotics.

Results: . From 261 eligible patients, 166 were male (63.6%). Median \pm IQR (25-75) age was 67.5 (56-78). Diabetes mellitus predominated (43.5%) among all comorbidities (n= 193, 73.9%). Patients received antibiotics for a non-infectious cause (n=40, 15.3%) or for microbial colonization (n=30, 11.5%) before IDS intervention. In all non-infectious causes and in 56% of colonization cases, antibiotics were discontinued following the IDS consultation. Nosocomial infections, accounted for 45% of all infections. Lower respiratory tract (LRTI) (26, 7%) and bloodstream (BSI) (20%) were the commonest infections. One third of microbiologically documented infections were caused by multi-drug resistant pathogens-MDR including MRSA, and Gram negatives. Escalation of antibiotics in MDR infections was performed in 15 cases (50%). De-escalation of antibiotics was performed following IDS consultation in 42 cases (22% of all identified infections). Only microbiological documentation of infections was independently associated with de-escalation of antibiotics by the IDS [OR (95%CI): 2.4 (1.1-5.5), p=0.027] in a logistic model including age, blood/urine catheters and nosocomially acquired infections.

Conclusions: In our cohort, inappropriate use of antibiotics was due either to misclassification of illness or to misinterpretation of microbiological data. By a routine bedside approach, experienced and dedicated IDS team succeeded in optimizing antimicrobial treatment in a hospital with high epidemiological trends for MDR pathogens.