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Abstract (poster session)

An innovative study of intra-abdominal infections to test the appropriateness of the revised trust antibiotic prophylaxis in adult surgery guidance. Results from intra-abdominal infections study for monitoring antimicrobial resistance trend

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Background: Blackpool Teaching Hospitals[BTH] operate a successful healthcare associated infection[HAI] and antibiotic stewardship programme. Revised antibiotic prophylaxis in adult surgery[APAS] guidance including new antibiotic choices to reduce C. difficile infections [CDI] was implemented. BTH was one of the UK sites for the study monitoring antimicrobial resistance trend[SMART] in intra-abdominal infections[IAI]. We present findings of an innovative project aimed to assess the appropriateness of the revised APAS antibiotic choices in abdominal surgery by comparing it to SMART IAI isolates/susceptibility results. Methods: A review of database of 61 intra-abdominal infections (IAI) isolates [from pus/intra-abdominal swabs] submitted to SMART[2008-10]. Comparing this to the revised APAS guidance for abdominal surgery Results: Revised APAS guidance for abdominal surgery is an aminoglycoside plus metronidazole at induction replacing previous guidance of cefuroxime plus metronidazole. Results from SMART: Escherichia coli 60%(18/30), followed by Klebsiella pneumoniae 13%(4/30), Enterobacter cloacae 7%(2/30). 5% E. coli isolated were ESBL positive but fully sensitive to gentamicin. MICs to following antibiotics were tested in the study: ertapenem(ETP), imipenem(IMP), cefepime(CPE), cefotaxime(CFT), ceftazidime(CAZ), ceftriaxone(CAX), ampicillin/sulbactam(A/S), piperacillin/tazobactam(P/T), amikacin(AK), ciprofloxacin(CP), levofloxacin(LVX). Key susceptibility results included: E. Coli: 100% to ETP, IMP & AK; >90% to cephalosporins; >80% to A/S, CP & LVX. Klebsiella pneumonia: 100% susceptible to all antibiotics tested. ESBL+ E. Coli organisms: 100% susceptible to ETP, IMP, A/S, P/T & AK. From 2008 to 2010, a downward trend of reduced susceptibility was noticed - E. Coli to cephalosporins, fluoroquinolones & piperacillin/tazobactam. K. pneumonia remained 100% susceptible to all agents in this study over the years. Discussion: The trust has successfully and significantly reduced rates of CDI, MRSA and ESBL+ve Gram negatives over the last three years. There is high emphasis on antibiotic stewardship, education/training, regular microbiology ward rounds and consultations, regular antibiotic compliance audits and feedback. This innovative project examined the appropriateness of the revised APAS guidance. All isolates were susceptible to aminoglycosides while reduced susceptibility to cefuroxime was evident from this study. Details to be presented.