propensity matched pairs of 2:1 match and subgroup analysis on propensity matched pairs of (1) proven iBHS alone (2) probable iBHS alone (3) ICU admission (within 24h of culture sampling) (4) patients receiving vasopressor therapy (within 24h of culture sampling) (5) Group A iBHS alone (6) Non Group A iBHS alone. There was no statistically significant difference in the ORs for in-hospital mortality between clindamycin and propensity-matched non-clindamycin cases in the primary analysis (P) as well as all sensitivity and subgroup (1) analyses.

Figure 3: SOFA Score Trajectory by Survival Status

Abbreviations: B: Non-Clindamycin cases; BC: Clindamycin Cases

Figure 3 Legend: SOFA score by day of therapy of clindamycin and non-clindamycin matched cases based on survival status from day zero (day prior to antibiotic therapy) to day four of therapy. The linear mixed models were used to assess the time trends and the clindamycin effect on the longitudinal SOFA scores. SOFA trajectory was examined for the post matching sample. Square root transformation was applied to the SOFA score to meet the normality assumption. Mean Baseline SOFA scores (baseline day) to therapy were similar amongst clindamycin and non-clindamycin subjects (mean [standard deviation (SD)] SOFA score: 1.88 [2.48] vs. 1.96 [2.60]; P = 0.634). On day 4 of therapy SOFA scores were similar between remaining 310 clindamycin and 286 non-clindamycin patients (mean [SD] SOFA scores: 1.79 [2.88] vs. 1.67 [2.49]; P = 0.586). The SOFA delta (day 0 SOFA score - day 4 SOFA score) was similar between the two groups (P = 0.131). When examined amongst survivors only, SOFA scores on day 4 of therapy were similar between and 272 non-clindamycin and 310 clindamycin hospitalized patients (mean [SD] SOFA score: 1.45 [2.20] vs. 1.52 [2.44]).

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474. Battling Addiction: Impact of Intravenous Drug Use on Invasive Skin and Soft Tissue Infections

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Session: 51. Soft Tissue and Skin Infections
Thursday, October 3, 2019: 12:15 PM

Background. Although skin and soft-tissue infections (STIs) remain a common cause of hospitalization for intravenous drug users (IVDU), little has been done to identify whether there should be differences in the SSTI management of IVDU vs. nonusers. The objective of this study was to evaluate the impact of documented intravenous drug abuse on the overall management of invasive STIs in hospitalized patients.

Methods. This retrospective cohort study randomly selected 100 IVDU and 100 nonusers (controls) hospitalized for an SSTI over 18 months in a community teaching hospital. Patients eligible for inclusion were 18–60 years old and treated with IV inpatient antibiotics for at least 48 hours. Pregnant women, transfers from an outside hospital, and diabetic foot infections were excluded. The primary endpoint was hospital length of stay (LOS). Secondary endpoints included: percentage prescribed empiric combination antibiotic therapy, percentage prescribed an anti-pseudomonal agent, inpatient and total antibiotic duration of therapy (DOT), 30-day readmission rates, and 30-day emergency department (ED) visit rates.

Results. The study population was predominantly male (66%), Caucasian (72%), and had a mean age of 40 years old (18–99). IVDU were more likely to have complications (18% vs. 6%) and polymicrobial infections (19% vs. 2%). Mean hospital length of stay was 9.0 days for IVDU compared with 4.8 days for controls (P < 0.001). There was no difference in empiric combination therapy (48% vs. 37%; P = 0.115) or empiric exposure to an anti-pseudomonal agent (38% vs. 30%; P = 0.232). Mean duration of inpatient antibiotic DOT was longer in IVDU (7.5 days vs. 4.3 days; P = 0.001), but total antibiotic DOT was similar between groups days 13.8±12.3 for the IVDU group vs. 16.2±12.5 for the non-IVDU group (P = 0.009); however, there was no difference in 30-day readmissions (14% vs. 16%; P = 0.692).

Conclusion. Documented IV drug abuse resulted in a significant increase in the length of stay in hospitalized adults with STIs requiring IV antibiotics. Exposure to combination therapy and anti-pseudomonal agents did not differ between the groups as would be expected. In the future stewardship initiatives are needed to increase adherence to SSTI guideline recommendations for empiric therapy.

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475. High Rate of Extended-Spectrum β-Lactamase Producing Gram-Negative Infections and Associated Mortality in Ethiopia: A Systematic Review and Meta-Analysis

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Session: 52. HAI: MDRO - GNR Epidemiology, ESBL Producers
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Background. Extended-spectrum β-lactamase (ESBL)-producing Gram-negative bacteria is associated with high mortality due to ineffective antibiotic treatment. To date, regular surveillance of multidrug-resistant (MDR) pathogens is lacking in Ethiopia. For this report, published data regarding ESBL-producing bacteria in different regions of Ethiopia were reviewed systematically. To our knowledge, this is the first systematic review from Ethiopia on ESBL-producing infections and associated mortality in the country.

Methods. A literature search was conducted in PubMed, PubMed Central, and Google Scholar from January 1, 1990 to April 28, 2019, using the following search terms: “ESBL producing Enterobacteriaceae,” “Gram-negative bacterial infection associated with mortality,” and “Ethiopia.” Patient mortality associated with infections by ESBL-producing Gram-negative bacteria was recorded.

Results. Fourteen publications were eligible for review. Totally, 1,782 Gram-negative bacteria isolated from 5,191 clinical samples were included. The phenotypic pooled rate of ESBL-producing Gram-negatives was estimated to be 52.9(95% CI: 50.5%–55.4%). Among different species, ESBL rates were 65.7% (262/399) Klebsiella spp., 60.6% (203/336) Enterobacter spp., 47.8% (22/46) Citrobacter spp., 47.0% (383/815) E. coli, 45.7% (85/186) for Salmonella spp., 27.4% (15/54) for Proteus spp., 16.7% (4/24) for P. aeruginosa, 14.3% (3/21) for Acinetobacter spp., and 40.5% (15/37) for others, respectively. ESBL genes were confirmed in three studies. blaCTX-M-1, blaTEM, and blaSHV were the predominantly detected genes. Two studies reported mortality associated with Gram-negative infections and 86% (12/14) of the patients infected with ESBL-producing bacteria died.

Conclusion. In this meta-analysis, the pooled phenotypic prevalence of ESBL-producing pathogens is considerably high. Also, the mortality due to ESBL-producers is high but data are scarce. This highlights the need for establishing a surveillance and upgrading of clinical microbiology laboratories in the country for routine antibiotic susceptibility testing. The capacity to detect ESBL genes is desirable for continuous surveillance of MDR.

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476. Risk Factors of Community-Onset Extended-Spectrum β-Lactamase-Producing Klebsiella pneumonias Bacteremia in South Korea Using National Health Insurance Claims Data

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Background. Antibiotic resistance is a significant threat to public health not only in healthcare settings but also in community because antimicrobial-resistant infection can be transmitted in community. Although it is essential to know whether there are particular reasons that caused antibiotic-resistant infection in community, there is lack of evidence regarding risk factors for community-onset extended-spectrum β-lactamase-producing Klebsiella pneumonias bloodstream infection (ESBL KP BSI) in South Korea. In the present study, we aimed to reveal risk factors for community-onset ESBL KP BSI.

Methods. From May 2016 to April 2017, patients with community-onset KP BSI (n = 498) from six sentinel hospitals in South Korea were included. The hospitals are found in different districts throughout South Korea, and had a total of 5,194 beds, ranged from 715 to 1,050 beds per hospital. Admission history and previous usage of antibiotics and medical devices before bacteremia were acquired from National Health Insurance claims data. Risk factors of ESBL-KP BSI were analyzed with a multivariable logistic regression model. PCR and sequencing for the identification of genes encoding ESBLs, and multilocus sequence typing were performed.

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