Spondylodiscitis. Spondylodiscitis is more sensitive than AFB smear and culture in diagnosing tuberculous spondylodiscitis in this study. Genexpert in tissue from infective spondylodiscitis in whom genexpert was done, 12 patients had positive genexpert as compared with 7 AFB culture positive patients. In two samples in which genexpert was done, 12 patients had positive genexpert as compared with a Composite Reference Standard (CRS) based on clinical characteristics of patients that have completed traditional therapy with 9 months of isoniazid may be a favorable option over the traditional 9 months of isoniazid in certain populations.

Methods. A retrospective chart review (July 2013–March 2017) to compare the 9H group and 3H group. Demographic and clinical variables were described by therapy type and groups were compared using Fisher’s exact test or t-test, as appropriate.

Results. Patients in the study sample (n = 124) had a mean age of 49.8 (SD=14.8) years old. Approximately half received 3HP (n = 64, 51.6%). Demographics in the 3HP and 9H groups were similar. Significantly more patients in the 3HP group completed treatment (81.3% vs. 61.7%, P < 0.001). No patients were lost to follow-up in the 3HP group, 14 (23.3%) were lost in the 9H group. Gastrointestinal (GI) upset (n = 16), elevated liver function tests (LFTs) (n = 11), and headaches (n = 9) were the most frequent side effects. Except for neuropathy and pancreatitis, all other adverse side effects had higher incidence in the 3HP group. Specifically, the incidence of GI symptoms (23.4% vs. 1.7%, P = 0.0003), weakness (19.4% vs. 0%, P = 0.028), and headache (14.1% vs. 0%, P = 0.003) were significantly higher in the 3HP group. Of the observed patients with adverse reactions that received 3HP; 88.24% (n = 30) had them resolved within the first two weeks.

Conclusion. The 3H group had a higher completion rate and no loss to follow-up compared with 23% loss to follow-up in the 9H group, however, adverse reactions were significantly higher in the 3HP group. Closer weekly monitoring of the 3HP group could lend itself to capturing more adverse reactions, however, 88% of those adverse reactions resolved within the first two weeks of therapy. Liver function tests were not significantly different (P = 0.2079) between the two groups, and were mildly elevated. We conclude that three months of rifapentine plus isoniazid for the treatment of LTBI may be a favorable option over the traditional 9 months of isoniazid in certain populations.

Disclosures. All authors: No reported disclosures.

2114. Prevalence of Tuberculous Spondylodiscitis and Diagnostic Utility of Xpert MTB RIF Rajalakshmi Ananthanarayanan, MBBS, DNB1; Ranjith Unnikrishnan, MS2; Sherin Shyam, MBBS1 and Amarnath Purayyil, MBBS1

1Infectious Diseases, Kerala Institute of Medical Sciences, Trivandrum, India, 2Spine Surgery, Kerala Institute of Medical Sciences, Trivandrum, India, 3Kerala Institute of Medical Sciences, Trivandrum, India, 4Orthopaedics, Kerala Institute of Medical Sciences, Trivandrum, India

Session: 239. Diagnostics Mycobacteriology Saturday, October 7, 2017: 12:30 PM

Background. To understand the prevalence of TB spondylodiscitis and the diagnostic utility of Xpert MTB RIF (Genexpert) in the diagnosis of TB spondylodiscitis as compared with a Composite Reference Standard (CRS) based on clinical, mycobacterial smear, culture, pathological, radiological findings and clinical follow up.

Methods. 69 patients with infective spondylodiscitis who underwent surgical or image guided tissue biopsy were evaluated during May 2014 to February 2017. Tuberculous spondylodiscitis were classified as ‘confirmed’ if culture grew MTB, ‘probable’ if in the absence of positive AFB culture, clinical, radiological or pathological findings favor TB, ‘possible’ if all negative but response to ATT was noted.

Results. 36 patient had culture confirmed pyogenic spondylodiscitis; 17 cases were treated empirically though the tissue culture was negative as HPE was suggestive of pyogenic spondylodiscitis. 3 had non-infective etiology. Among 42 who were treated as tuberculous spondylodiscitis, in initial 16 patients genexpert was not done due to non-availability. Among these 16 patients, 1 had confirmed TB as the tissue grew MTB (MDR TB), 15 were treated as probable TB. All patients except one had good outcome. In the 14 patients treated as tuberculous spondylodiscitis in whom genexpert was done, 12 patients had positive genexpert as compared with 7 AFB culture positive patients. In two samples in which genexpert was negative, TB was confirmed by AFB culture and in another by HPE. All patients except one (who had underlying lymphoma) improved with ATT. In all other 10 cases where genexpert was negative, the etiology was pyogenic.

Conclusion. Pyogenic spondylodiscitis is more prevalent than tuberculous spondylodiscitis in this study. Genexpert in tissue from infective spondylodiscitis is more sensitive than AFB smear and culture in diagnosing tuberculous spondylodiscitis.

Table 1: Performance of Genexpert as compared with AFB culture

| Culture – | genexpert + | genexpert – |
|-----------|------------|------------|
| Culture + | 6          | 1          |
| Culture + | 6          | 1          |

Disclosures. All authors: No reported disclosures.

2115. Prevalence of Gene Mutations profiles by GenoType MTBDRplus/sl to First Line Antituberculosis Drugs and Clinical Characteristics in Drug Resistant Tuberculosis Patients Referred to the National Institute of Respiratory Diseases in Mexico City

Jose Arturo Martínez-Orozco, MD1; Blanca A. Nuñez-Luna, MD1; Luis A. Narváez-Díaz, Microbiologist2; Mariela Segura-Del Pilar, PHD1; Mario Mujica-Sánchez, Microbiologist1; Miguel Angel Salazar-Lema, MD3 and Christian D. Mireles-Davalo1; Microbiologist1; Infectious Diseases and Clinical Microbiology Department, National Institute of Respiratory Diseases, Mexico City, Mexico, 2Pulmonology, National Institute of Respiratory Diseases, Mexico City, Mexico, 3Clinical Microbiology, National Institute of Respiratory Diseases, Mexico City, Mexico

Session: 239. Diagnostics Mycobacteriology Saturday, October 7, 2017: 12:30 PM

Background. Drug resistance tuberculosis, specially MDR and XDR are a big challenge for diagnosis and treatment. In Mexico the prevalence of MDR is between 3-5%, a number probably underestimated due to lack of diagnostic tests for susceptibility. The National Institute of Respiratory Diseases in Mexico City is the national reference center for MDR/XDR tuberculosis. In our country there is no data about the gene mutations involved in drug resistance to first line antituberculosis treatment nor the clinical characteristics that accompany these findings.

Objective: Evaluate the prevalence of genotyping profiles according to a line probe assay (LPA) in patients with drug resistance tuberculosis and their associated clinical characteristics

Methods. Retrospective cohort from 2010 to 2014 of M. tuberculosis isolates with any type of resistance to first line antituberculosis drugs identified by MGIT SIRE and in which GenoType MTBDRplus/sl were performed, we evaluate prevalence of genotyping profiles according to the LPA within the isolates and gather data from those with complete medical records to assess resistance characteristics.

Results. In 52 and 33 isolates phenotyping and genotyping MTBDRplus/sl respectively were performed, 41 resistant to Isoniazid INH with 75% genotypic concordance, 33 resistant to rifampicin Rif with 75.6% concordance, 14 to streptomycin SM with 23% concordance and 10 to ethambutol EMB with 100% concordance, 54% MDR tuberculosis. The genotyping profile for Rif was absent of probes rpoB Wild Type 8 (WT) 57.7%, WT 7 30.8% and presence of rpoB mutation 3 MUT (19.2%). For INH absence of InhA WT2 48.1% and InhA WT1 19.2%. For EMB absence of embB WT1 30.8% and for SM absence of rts WT1 (19%). Absence of InhA WT was associated with female gender (P = 0.01) and DM2 (P = 0.032) patients, other clinical/biochemical characteristics and mortality was not different in patients with or without the genotypic profile for each drug. Cavitary disease by CT was more frequent in patients with WT probe absence in Rif and INH than those who did not have a LPA suggestive of resistance for this drug.

Conclusion. Wild Type probe absence is the frequent finding in our isolates according to LPA in Rif, INH, EMB and SM, intrinsic host factors and clinical characteristics seem not to be related to a particular resistant gene profile.

Disclosures. All authors: No reported disclosures.

2116. Resistance of Mycobacterium and Outcomes of Pulmonary Tuberculosis Depending on VNTR-Profile Among Different Age Groups of Patients in Ukraine

Olha S. Konstantynovska, MD1; P.I. Poteiko, MD1; M.M. Kochueva, MD1; I.I. Hrek, MD2; A.V. Bohoshuk, MD1; and Olexi S. Solodianskiy, MD2

1Kharkiv Medical Academy of Postgraduate Education, Kharkiv, Ukraine, 2National Scientific Center “Institute for Experimental and Clinical Veterinary Medicine”, Kharkiv, Ukraine

Session: 239. Diagnostics Mycobacteriology Saturday, October 7, 2017: 12:30 PM

Background. Ukraine is among the five countries with the highest burden of multiple drug-resistance tuberculosis (MDR TB). MDR TB has found in 22 % new cases of TB and in 56 % of retreated cases in Ukraine (WHO, 2015), and the elderly among TB-affected persons are near 23%. The aim was to study the resistance of
Mycobacterium tuberculosis (MtB) and outcomes of TB depending on MtB strains' genotypes among different age groups of TB patients.

Methods. In 2015–2016, 115 clinical cases of severe first diagnosed TB were studied. Identification of MtB strains was made by using VNTR-genotyping by ETR A-E loci. Resistance of MtB to drugs was done according to WHO recommendations. There was found large the cluster of identical strains among Beijing’s family with VNTR-profile 42435 – 53 (46 %). All the cases were divided into 4 groups: group 1 – young adults, MtB Beijing profile 42435, n = 29, group 2 – elderly adults, MtB Beijing profile 42435, n = 24, group 3 – young adults, non-42435 profile, n = 29, group 4 – elderly adults, non-42435 profile, n = 33. The outcomes were analyzed after continuation phase of treatment.

Results. Beijing strains with VNTR profile 42435 were primary resistant in 37.7 %, and they become secondary resistant after at least 6 month treatment in 50.9 %. In cases of Beijing 42435-profile, the clinical courses of TB were very severe, with episodes of hemoptysis/pulmonary bleeding, the outcomes were unfavorable – treatment success was just in 35.7 %, cases, fail – 33.9 %, lost to follow-up – 15.2 % and 15.2% of patients died, with no difference depend on the patient’s age, P = 0.05. Another MtB strains were primary resistant in 30.6%, and they become secondary resistant after at least 6 month treatment in 32.3%. (group 3 – 46.6%, group 4 – 18.8%, P < 0.01). The clinical courses of TB in cases of non-42435 VNTR profile were severe, but without episodes of hemoptysis/pulmonary bleeding, the outcomes were much more favorable – treatment success was in 58.1 % of cases (group 3 – 40%, group 4 – 75.1%, P = 0.05), fail – 22.5 %, lost to follow-up – 11.3% (group 3 – 20%, group 4 – 3.1%, P < 0.05), 8.1% of patients died, with no difference depend on the patient’s age, P < 0.05.

Conclusion. Beijing strains with VNTR-profile 42435 are spread very fast in Ukraine and compose the cluster of virulent primary resistant strains, with severe clinical course and worst outcomes.

Disclosures. O. S. Konstantynovska, Kharkiv Medical Academy of Postgraduate Education: Employee, Salary; P. I. Poteiko, Kharkiv Medical Academy of Postgraduate Education: Employee, Salary; M. M. Kochuieva, Kharkiv Medical Academy of Postgraduate Education: Member, Salary; I. I. Hrek, Kharkiv Medical Academy of Postgraduate Education: Employee, Salary; A. V. Rolozhchin, Kharkiv Medical Academy of Postgraduate Education: Employee, Salary; O. S. Solodionkian, National Scientific Center for Institute for Experimental and Clinical Veterinary Medicine: Employee, Salary.

2117. Gram-Negative Polymicrobial Bloodstream Infections and Clinical Decision Making with a Microarray Testing System
Kimberly Cbaees, PharmD, BCPS; Jason Pogue, PharmD; Paul Lephart, PhD; Emily Helt, PharmD, BCPS-AQID; and J. Kristie Johnson, PhD, University of Maryland School of Pharmacy, Baltimore, MD; Detroit Medical Center/Wayne State University, Detroit, Michigan, Detroit Medical Center University Laboratories, Detroit, Michigan, Pharmacy Practice and Science, University of Maryland School of Pharmacy, Baltimore, Maryland, University of Maryland School of Medicine, Baltimore, Maryland.

Session: 240. Stewardship: Impact of Diagnostics
Saturday, October 7, 2017: 12:30 PM

Background. Molecular rapid diagnostic tests, such as the microarray-based Verigene BC-GN, allow for rapid identification of both Gram-negative and Gram-positive organisms. However, the clinical significance of positive results in bloodstream infections (BSIs) remains unclear. The purpose of this study was to examine clinical outcomes of BSIs in which a single isolate was detected with the Verigene BC-GN and to determine if initial antibiotic regimens were optimized.

Methods. A total of 1,003 sets of GN blood cultures were reviewed. Fifty-seven sets were excluded because of contamination, 12, because the patient had an additional positive blood culture, and 143, because they were not collected for bloodstream infections. The remaining 729 sets were included in the analysis. The clinical course of BSIs and outcomes of patients were retrospectively reviewed and evaluated for incidence of missed GNs, antimicrobial de-escalations, and de-escalations due to infection in the complementary blood culture bottles. One hundred and seven sets were reviewed for antimicrobial de-escalations in which a single isolate was detected by Verigene BC-GN. The remaining 622 sets were reviewed for missed GNs.

Results. Seventy-two percent (115 of 159) of patients with a single isolate detected by Verigene BC-GN had a positive result in the complementary blood culture bottle. One hundred and seventy-four percent (81 of 466) of patients with a single isolate detected by Verigene BC-GN had a positive result in the complementary blood culture bottle. The median time to optimization was 21 hours (range: 0 to 183 hours) compared with standard VITEK reporting. Furthermore, RDDDT is simple and applicable worldwide, especially in resource limited areas.

Disclosures. All authors: No reported disclosures.

2119. Clinical Impact of Expedited Pathogen Identification and Susceptibility Testing for Gram-negative Bacteria and Candidemia Using the Accelerate Pheno™ System
Jason Burnham, MD; Meghan Wallace, BS; Brian Fuller, MD, MSCF; Carey-Ann D. Burnham, PhD and Marin Kolle, MD, FACP, FCPP, Washington University in Saint Louis, Saint Louis, Missouri; Washington University School of Medicine, Saint Louis, Missouri, Washington University School of Medicine, St. Louis, Missouri, Pathology and Immunology, Washington University School of Medicine, St. Louis, Missouri, Washington University School of Medicine, St. Louis, Missouri.

Session: 240. Stewardship: Impact of Diagnostics
Saturday, October 7, 2017: 12:30 PM

Background. Inappropriate initial antibiotic therapy (IAT) for sepsis increases mortality. We evaluated the clinical impact of IAT and antimicrobial susceptibility testing (AST) have the potential to improve mortality and antimicrobial stewardship. The Accelerate Pheno™ system (AXDX) is a newly FDA cleared fast diagnostic testing system that provides ID and AST for Gram-positive and Gram-negative bacteria (GNB) and ID for C. difficile bloodstream isolates.