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ABSTRACTS

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the isolated VGS was performed with the *E*-test method (AB Biodisk, Solna, Sweden) on Mueller-Hintons medium. Isolates of VGS resistant to penicillin (MIC > 2.0 mg/L) were also tested for susceptibilities to linezolid, erythromycin, vancomycin and ciprofloxacin. Clinical data as fever and mucositis on admission were registered. Chemotherapy, ongoing antibiotic treatment, antibiotic prophylaxis, as well as previous antibiotic treatment up to 1 year before start of the study were registered.
Results: One patient was excluded because of a *Staphylococcus aureus* infection in the stem cell harvest. In 48/49 patients VGS was isolated from the oral cavity. Twelve of 48 (25%) patients had VGS strains that were resistant to penicillin (MIC > 2.0 mg/L). Eleven of the isolates were identified as *Streptococcus mitis* and one as *Streptococcus sanguis*. The patients that harboured penicillin resistant VGS (MIC > 2.0 mg/L) had more septicemias ($P = 0.04$) and more days of treatment with trimethoprim-sulphametoxazole than patients with susceptible or intermediately resistant VGS ($P = 0.04$). There were no other statistical significant differences between the two groups. Four of 12 isolates resistant to penicillin were also resistant to erythromycin (MIC > 0.5 mg/L).
Conclusions: We summarize that 25% of the patients had oral VGS resistant to penicillin that is higher than expected. This group of patients gets higher burden of antibiotic therapy due to infections after chemotherapy that might select penicillin resistant VGS strains.

P480 Epidemiology and resistance pattern of bacteremia pathogens in medical patients over a 6-year period

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Objective: To estimate difference regarding epidemiology, outcome and resistance (R) to antimicrobials of medical patients with bacteremia (B), over a 6-year period, i.e. 1997–2002.
Methods: Prospective demographic, clinical and microbiology, as well as hospital stay and outcome, data entry of medical patients with documented B. Time January 1997 to December 2002. Data entry and analysis in IBM compatible PC using EPI5-Info (CDC, 1993) programme. Sensitivity as by Kirby-Bauer, statistics by Yates corrected/2.
Results: Documented B in a total of 301 pts (M: 47.2%, F: 52.8%) mean age 69.6 years. Chronic disease present in 79.5%, and nosocomial Â in 24.5% of patients. More frequent pathogens were *E. coli* (37%) *S. aureus* (15.6%), and most common source of B was the urinary tract (42%). Main difference between first and second half of the studied period was the rise of *Klebsiella sp.* from 2.1 to 12.6% and relative rise of Enterococcal B and Candidemias. Regarding R data of Gram-pathogens, significance was most prominent to 3rd generation cephalosporins [rising from 6.9 to 20.4%, $P = 0.024$] and ciprofloxacin [9.0–19.4%, $P = 0.06$]. The annual rise of Gram + cocci percentage is noted, without, fortunately, a rise to either MRSA rates or glycopeptide R. Mean hospital stay was 13.4 days and mortality during stay was 18%, though not always directly attributed to B.
Conclusions: The constant variability of B pathogens, the appearance of less expected ones, and mainly R profile changes deem continuous surveillance and awareness, to ensure the optimal empirical antimicrobial choice based on the most recent data of the given milieux.

P481 Detection of rifampicin and izoniazid resistance in *Mycobacterium tuberculosis* strains from Samara Region (Central Russia)

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Introduction: Recently high rates of tuberculosis incidence and prevalence are observed in civilian and prisons sectors in Russia. One of the main reasons for high morbidity levels and ineffectiveness of treatment is wide spreading of drug resistant *Mycobacterium tuberculosis* strains, but accurate and comprehensive information on levels of drug resistance among strains circulating in Central Russia is unavailable.
Objective: Rifampicin and izoniazid resistance detection in TB isolates from Samara (Central Russia) civilian and prison TB hospitals and dispensaries in 2000–2002 by revealing mutations in rpoB, katG and inhA genes using Macroarray technique.
Methods: A total of 342 *M. tuberculosis* isolates were tested using Macroarray method. It is based on multiplex amplification of *rpoB*, *katG* and *inhA* genes fragments (with three pairs of biotin labeled primers) following by dot-hybridization with normal and mutant oligonucleotide probes (fragments of *rpoB*, *katG* and *inhA* genes in which mutations occur) immobilized on nylon membrane strips. Mycobacterial DNA was extracted by heating of cell suspensions following by chloroform extraction. Streptavidin-alkaline phosphatase color development system was used for visualization of results.
Results and conclusions: In total, 78.8% of isolates was determined to be resistant to one or more drugs. From those, 66.3% were resistant to rifampicin and 92.9% to izoniazid. Izoniazid resistance in the most part of isolates (88.4%) was due to the mutation in 315 codon of katG gene. The percentage of resistant mycobacteria was higher in those isolated from prisoners than from civilians (84.7 and 75.1%, respectively). From resistant isolates 165 specimens (48.2%) possessed mutations both in rpoB and katG (or inhA) genes and were determined as multidrug resistant (MDR). It proves the fact that rifampicin resistance is very often combined with izoniazid resistance and serves as indicator of MDR. Very high prevalence of MDR *M. tuberculosis* strains in Central Russia reflects general TB situation in Russian Federation and other countries of the former Soviet Union and is a serious problem for doctors and public health in general.

P482 Clinical experience of linezolid in a UK teaching hospital

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Introduction: Linezolid, an oxazolidinone antibiotic, has a unique mode of action and is effective against a broad range of resistant and sensitive gram positive infections. In order to prevent misuse of this useful agent the antibiotic committee for Tayside hospitals decided on a number of strategies to control prescribing. These included agreement on appropriate clinical situations for use of linezolid (below), all prescriptions are subject to approval by infection specialists and continual monitoring by clinical pharmacists.
Objectives: Review the clinical experience of linezolid use and compliance with our guidelines.
Method: Clinical pharmacists recorded information on all patients prescribed linezolid and ensured approval had been obtained from an infection specialist. Medical notes were reviewed retrospectively for patients prescribed linezolid since its introduction (19 months). Data were collected on organisms, previous therapy, indications, duration of therapy, clinical and microbiological outcomes and linezolid related adverse reactions.
Results: Forty courses of linezolid were prescribed, notes were reviewed for 33 of these patients. A number of patients fitted more than one criteria for use of linezolid ($n = 45$). See table.

Clinical situation	%
VRE	9
Hypersensitivity or intolerance to previous regimen	24
Clinical failure or lack of improvement	11
Poor IV access	7
Patient no longer wishing IV therapy	24
Deteriorating renal function	9
Drug interaction with rifampicin or concern about hepatotoxicity	7
Facilitation of hospital discharge by switching to oral therapy	9

There was 100% compliance with our guidelines. Seventy-six percent of prescriptions for linezolid were for indications not currently licensed in the UK. The majority of patients (27) were treated for MRSA/MRSE infections. Eleven patients had a bone or joint infection. Thirty patients had previously been treated with a glycopeptide. The mean duration of therapy was 23 days. 28/33 patients had clinical outcome documented and 26 (92%) were classified as cure or improved. 8/33 patients had a linezolid related adverse reaction, all were fully reversible.
Conclusions: Compliance with our guidelines was excellent and our control measures for prescribing have proved effective. Linezolid was used in a wide of range of clinical scenarios with good outcomes. This study represents the first