Abstract 18 – Table 1. Characteristics of the 13 patients with positive samples for respiratory virus

Patient	Sample	Virus	Symptom/Image	Treatment
1	NW	IFV A+RSV	Coryza, wheezing and dyspnea	Oseltamivir
2	BAL	hMPV	Coryza and sore throat	Aciclovir for oral herpes
3	BAL	ADV+hMPV	Respiratory failure	Prophylatic Ganciclovir
4	BAL	IFV A	Coryza	Oseltamivir
5	NW	hMPV	Coryza and cough	None
	BAL	hMPV	Pulmonary nodule	None
6	NW	IFV A	Coryza, cough and fever	Oseltamivir
7	NW	PIV	Intense cough	None
8	BAL	hMPV	Thickened airway at chest CT	None
	NW	PIV	Coryza and cough	Prophylactic oselltamivir
9	NW	IFV A	Respiratory failure	Oseltamivir
	NW	hMPV	Coryza and cough	None
10	NW	RSV+hMPV	Coryza and cough	None
11	BAL	hMPV	Dyspnea	Aciclovir for oral herpes
12	BAL	hMPV	Bronchi hyperemia	Ganciclovir for CMV colitis
13	NW	hMPV	Coryza and headache	None

of RV infection. Other RV identified are shown in table 1. One patient died because of ADV infection.
Conclusions: Respiratory events are common after LT and may cause significant morbidity. Rapid diagnosis of RV infections favors early treatment and may help to differentiate from other conditions. In our country, RV circulate year round, though more frequently during winter months.

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Etiological Agents of Bacterial Infections in the Early Posttransplant Period after Liver Transplantation: Bacteria and their Susceptibility

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Introduction: An analysis of bacterial infections in the early posttransplant period after liver transplantation in adults.
Material and Methods: The study covered 83 adult patients undergoing liver transplantation from 2001 to the end of 2004. All the patients were followed prospectively for infections from the LT date and during the first four weeks after surgery. Basic immunosuppression consisted of steroids and tacrolimus. Antimicrobial prophylaxis was administered intravenously from the day of transplantation: piperacillin/tazobactam, fluconazole and selective bowel decontamination (orally a liquid suspension of amikacin and nystatin) was carried out. Samples of clinical materials (blood, urine, wound swabs, stool and other) were investigated. The microorganisms were cultured and identified in accordance with standard bacteriological procedures. Susceptibility testing was carried out using (NCCLS) procedures. The statistical analysis was made by chi-square test.
Results: 913 clinical samples taken from liver recipients were investigated in microbiological laboratory. In total 469 strains were cultured. Among the bacterial strains, the most common were Gram-positive bacteria n=331 strains (70.6%), Gram-negative bacteria n=133 strains (28.4%) and yeast like fungi n=5 strains (1%). In the early posttransplant period the common isolates were taken from Surgical Site Area n=284 (60%) with predomination of Gram-positive strains n=222 (78%), Gram-negative strains n=61 (21.5%). From blood n=99 strains (21.1%) were cultured: Gram-positive n=75 (75.8%) and Gram-negative n=22 (22.2%). Urine samples n=73 (15.6%): among them Gram-negative n=46 (63%), Gram-positive n=25 (34%), fungi n=2 (3%). Samples taken from respiratory tract n=13 (2.8%) strains were cultured: Gram-positive n=9 (69%), Gram-negative n=4 (31%). From 54 stool samples *Clostridium difficile* toxins were positive in 63%, only in 16.7% of samples *C.difficile* strains were detected, 30% were negative. We analyzed the susceptibility of cultured strains to antibacterial agents. In total n=10 strains of (MRSA), n=138 of (MRCNS) *staphylococci* were detected, 86% of *enterococci* were (HLAR) strains and from *Enterobacteriaceae* family 12.5% (ESBL) rods were detected.
Conclusions: The presence of (MDR) bacterial strains after liver transplantation such as: methicillin-resistant *staphylococci* (MRSA) – 52.6%, (MRCNS) 81.7%, *enterococci* (HLAR) 86%, enteric Gram-negative bacteria (ESBL) 12.5% required better professional infection controls.

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Urinary Tract Infections (UTI's) in the Early Period after Liver Transplantation

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Introduction: Urinary Tract Infection (UTI) is a one of the common infection in liver transplantation (LT).
Patients and Methods: The study covered 83 adult patients undergoing liver transplantation (piggy back technique) between September 2001 and October 2004. All the patients were followed prospectively for urinary tract infections from the LT date and during the first four weeks after surgery. Samples of urine were investigated for bacteriological cultures. The microorganisms were cultured and identified in accordance with standard bacteriological procedures. Susceptibility testing was carried out using National Committee for Clinical Laboratory Standards (NCCLS) procedures.
Results: Urine specimens were examined in 53 pre-operative recipients (63.9%) and in 64 patients (77.1%) during the first month after transplantation. Of the 182 samples investigated, 73 were positive. Bacterial strains were cultured from 17 recipients before LT and from 28 patients after surgery. Among the bacterial strains isolated in early period after LT (n=71), the most common were Gram-negative rods n=46 (63%) isolates, the *Enterobacteriaceae* family n=44 (95.6%) isolates among them n=12 (27.3%) of the Gram-negative rods were Extended-Spectrum Beta-Lactamases ESBL pos-

itive strains. Gram-positive bacteria were cultured 34% (n=25) and fungal strains 3% (n=2).
Conclusions: The predominance of Gram-negative rods was caused by ESBL positive and use of broad spectrum antimicrobial prophylaxis. The increased proportion of isolation Multi-Drug-Resistant (MDR) bacteria to antimicrobial agents may be due to the frequent use of these agents for prophylaxis of bacterial infections in liver transplant patients. These (MDR) bacterial strains caused severe UTI's in patients after LT.

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Fungal Infections in Patients after Solid Organ Transplants

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Introduction: Fungal infection is a severe complication in patients undergoing solid organ transplantations.
Objective: The objective of the study was to evaluate species distribution and antifungal susceptibilities of fungal isolates taken from patients after solid organ transplantation (SOT).
Material and Methods: The study included samples of urine, blood, systemic fluids and the swabs of the post-operative wounds, haematomas, drains taken from patients after kidney, liver or simultaneous pancreas-kidney transplantation hospitalized in Institute of Transplantation Medicine, Medical University of Warsaw and Department of General and Transplantation Surgery, Medical University of Warsaw in 2005- 2007. All cultured specimens were isolated by using Sabouraud medium with antibacterial protection using chloramphenicol and gentamicin (bioMerieux, France or Oxoid, England). Yeast-like fungi was incubated on CHROMAgar Candida Medium (Becton Dickinson R) and identified by using biochemical, automatic test ID32C (bioMerieux). Susceptibility of the strains to the antifungal agents: amfotericin B, itraconazol, fluconazol, voriconazol was tested using E-test (AB Biodisk) on RPMI agar plates (BiolifeR).
Results: The positive cultures were obtained in 662 samples from 402 patients receiving immunosuppressive therapy. There were cultured 267 isolates of *Candida albicans*, 223 *Candida glabrata*, 39 strains of *C. parapsilosis*, 37 *C. krusei* and 35 of *Trichosporon asahii*, 20 *Saccharomyces cerevisiae*, 9 strains of *Cryptococcus neoformans* 5 *C. lipolytica*, 6 strains of *C. lusitaniae* and 4 of *C. sake*, 5 strain of *C. quilliermondii*, 3 *C. rugosa* and 9 moulds from *Aspergillus fumigatus* species. From cultured strains 37.3% was naturally fluconazole resistant and 0.5% amphotericin B resistant. The acquired resistant to fluconazole was presented by 10 isolates, to itraconazole 26, to voriconazole 2 and to amphotericin B by 3 isolates.
Conclusions: The most numerable groups of isolated fungal species in patients after SOT were *C. albicans* 40% of all isolates and *C. glabrata* 33.7%. Moulds were cultured less often and they were found only in 1.4% of positive cultures. More than one third of isolated fungi were resistant to fluconazole.

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Selection of Resistant Fungi in Liver Transplant Recipients During use of New Anti-fungal Agents

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Background: The echinocandins and the new-generation azoles have been a boon to physicians managing fungal infections in transplant recipients. But Nature abhors a vacuum. In this report, we describe 2 liver transplant recipients on the new broad-spectrum anti-fungals who became colonized and infected with fungi resistant to these new agents.
Methods: Retrospective chart review. MIC of *Candida spp.* to azole anti-fungals measured by E-test method.
Results: Case 1, a 36-year-old man, received a right-lobe graft for fulminant hepatic failure, likely drug-induced. The transplant surgery was complicated by the need for a colostomy. While under standard immunosuppression, he was given caspofungin (CAS) for *Candida lusitaniae* in the bloodstream. Three weeks later blood cultures grew *Trichosporon asahii*, which responded to voriconazole (VCZ). Case 2 was a 56-year-old man with chronic Hepatitis B infection and hepatocellular carcinoma, who underwent living donor liver transplant with a left-lobe graft. He received standard immunosuppression. In the early post-transplant period, hypodensities developed segment 3, suggestive of infarction. In the 3rd post-transplant month, the fully-evolved infarcted areas were documented to be in communication with the biliary tree.
Repeated fevers led to the placement of a biliary drain. Bile aspirated on the 79th post-transplant day (PTD) grew *Candida albicans*, and the patient was given fluconazole (FCZ). A cholangiogram on the 139th PTD led to bile aspiration that cultured out *C. albicans* (FCZ MIC 1.5ug/ml) and *C. krusei*. A septic episode on the 150th PTD led to the use of VCZ and broad-spectrum antibiotics. Bile aspirated on the 160th PTD grew *C. glabrata* that was resistant to FCZ, VCZ, itraconazole and posaconazole.
Conclusions: Although CAS and VCZ have been a boon to physicians managing fungal infections, their use can be associated with the selection of fungi resistant to them. Care with the use of antibiotics should extend to the anti-fungals as well.

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Urinary Tract Infections in Renal Transplant Recipients

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Objectives: To determine the causative agents of urinary tract infections (UTIs) among renal transplant recipients and to compare the antibiotic susceptibilities of *Escherichia coli* strains isolated from complicated community-acquired UTIs and renal transplant recipients.
Methods: We evaluated 108 episodes of 82 recipients (46 women) with confirmed UTI who were transplanted during the period 1981 to December 2007 at our center. Medical records of the patients were reviewed retrospectively. To compare the susceptibility rates of *E. coli*, 226 isolates from non-transplant patients with complicated community-acquired UTIs were also evaluated.
Results: The mean age of the patients was 35.9 years in the range from 16 to 58 years. Sixty-three patients had single episodes. Seventeen episodes (15.7%) occurred in the first month following the transplantation, 32 (29.6%) in the period of the second month to sixth month and 59 (54.6%) occurred six months after transplantation. Sixty-six (61.1%) of the 108 isolates were *Escherichia coli*, 24 (22.2%) *Klebsiella spp.*, 5 (4.6%) *Enterococcus spp.*, 5 (4.6%) *Staphylococcus aureus*, 3 (2.8%) *Acinetobacter baumannii*, 1 (0.9%)