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Respiratory syncytial virus is an RNA virus belonging to the Paramyxoviridae and is mostly found in young children. This virus can also cause morbidity and mortality in immunocompromised adults. Respiratory virus infection (RSV) is an important complication in solid organ transplant patients but the longitudinal monitoring of these infections has not been extensively studied. Little has been described in literature regarding RSV pneumonia in adult heart transplant patients.

Here we report an interesting case of a 56 year old female with a history of non-ischemic cardiomyopathy starting in 2011. On January the 3rd of 2015 she successfully underwent a heart transplantation. Although there were no signs of respiratory disease at the time of hospitalization she showed respiratory insufficiency three days post-transplantation.

In the microbiology lab each respiratory sample is cultured and when indicated screened for a panel of 22 targets detected in 8 in-house RT-PCR multiplexes. This molecular panel covers the most important pathogens of viral respiratory infections and atypical bacterial pneumonia. The first respiratory sample of this patient was a bronchial aspirate taken three days post transplantation. The bacterial culture was negative but the sample tested positive for RSV-A with a high viral load (Ct value of 23). Follow up samples 15 days and 35 days post-surgery were still RSV positive although with decreasing viral load (Ct value of 25 and 28 respectively). Culture of respiratory samples showed the presence of Staphylococcus aureus only 10 days after surgery so RSV is most probably the primary cause of the respiratory disease. RSV was still detectable 1 month after transplantation which might be explained by the immunosuppressive treatment of the patient. The heart transplantation was performed during the RSV season. Some days before the surgery the lady had taken care of her young grandchildren so there indeed was a potential risk of community-acquired transmission.

**Conclusion:** Without testing for viral pathogens no accurate diagnosis for the respiratory failure of this patient could have been made. Since screening of adult patients for viral pathogens is not common practice at the IC-unit, this case illustrates the added value of molecular screening when signs of respiratory failure arise in adult immunocompromised patients.

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**Abstract no: 148**
**Presentation at ESCV 2016: Poster 152**

**Respiratory viruses in the intensive care unit: More frequent than expected**

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In the Laboratory of Microbiology of the OLV Hospital in Aalst respiratory samples (n = 3500/year), received from multiple hospitals spread all over Flanders, are analysed on a daily basis by in house multiplex real time PCR for a panel of viral and bacterial pathogens. The panel includes adenovirus, bocavirus, human metapneumovirus (hMPV), respiratory syncytial virus (RSV), para-influenzavirus (PIV) 1, 2, 3 and 4, Influenza virus A and B, enterovirus, rhinovirus, coronavirus, Bordetella pertussis & parapertussis, Mycoplasma pneumoniae and Chlamydia pneumoniae.

Before 2014, the majority of samples originated from children. The severe influenza epidemic in the winter season 2014–2015 made clinicians aware that viral infections in adults are not that innocent at all. Moreover, in the “Influenza season”, not only Influenza circulated but also other viruses were cause of severe disease. Correct identification of the pathogen is indispensable to administer or withhold therapy. As a consequence, the request for the real time PCR respiratory panel on samples from adult hospitalized patients increased.

In order to calculate the frequency of these pathogens in adult critically ill patients, a retrospective study was performed for the period September 2014 to May 2016 including patients transferred to the coronary care unit (CCU) and the intensive care unit (ICU) because of respiratory failure.

Respiratory panel results of samples, obtained in the window from 3 days before to 5 days after transfer to the CCU and IC units, were included. From the 126 samples, 44 samples were positive (34.92%) with 41 samples (33.81%) positive for a viral pathogen and 3 samples (6.82%) positive for a bacterial pathogen (1 M. pneumoniae, 1 C. pneumoniae and 1 B. parapertussis). None of the samples were positive for adenovirus or parainfluenzavirus.

As expected, Influenza A virus (n = 14) and Influenza B virus (n = 8) were the most frequent and 1 patient had a co-infection of both viruses. No other co-infection was found. Surprisingly, rhinovirus (n = 8) was found to be the third most frequent viral cause of infection. hMPV and RSV are known to cause severe respiratory problems in infants and RSV infections have also been observed in the immunocompromised host. In our study, not only RSV (n = 5) but also hMPV (n = 7) was found frequently and caused very severe “Influenza-like” disease.

We can conclude that viral infections are a common cause of respiratory problems in the intensive care unit and screening of these patients might be an important clue in diagnosis and correct treatment.

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**Multidrug-resistant cytomegalovirus infection in a pediatric stem cell transplantation patient**

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**Background:** Cytomegalovirus (CMV), a member of the Herpesviridae family, is characterized by a lifelong latency in the host. Clinical presentations of CMV infection are minimal in immuno-