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Poster Session V

Infections in immunocompromised patients

**VIRAL RESPIRATORY INFECTIONS IN A COHORT OF ADULT HEMATOLOGIC PATIENTS IN A UNIVERSITY HOSPITAL**

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**INTRODUCTION:** Respiratory viruses (RV) have acquired relevance in recent years as an important cause of morbidity and mortality in patients with haematological malignancies (HM), especially in recipients of hematopoietic stem cell transplantation (HSCT). However, their involvement in the prognosis of these patients and the relationship with the development of bacterial or fungal superinfections is still not well established.

**OBJETIVE:** To analyse the clinical characteristics and outcome of RV infections in a cohort of adults with HM in a tertiary hospital.

**MATERIALS AND METHODS:** Retrospective study of all adult hematological patients with upper and/or lower respiratory tract symptoms and a RV detection between September 2012 and May 2013 at the University Hospital Vall d'Hebron, Barcelona. Diagnosis was performed by multiplex PCR in samples of nasopharyngeal aspirate and/or bronchoalveolar lavage. Respiratory failure was considered when baseline oxygen saturation was < 90%.

**RESULTS:** A total of 79 isolates in 62 patients were identified during the study period: 19 (25.3 %) *Influenza* (13 *influenza B* and 6 *influenza A*), 15 (19%) *Rhinovirus*, 13 (16.5 %) *Coronavirus*, 11 (13.9 %) *Parainfluenza virus 3* (PIV-3), 7 (8.8%) *Respiratory Syncytial Virus* (RSV), 6 (7.6%) *Metapneumovirus*, 4 (5.1%) *Enterovirus*, 3 (3.7%) *Adenovirus* and 1 (1.2%) *Bocavirus*. Underlying diseases were acute leukaemia in 16 (25.8%) patients, multiple myeloma in 13 (21%), non-Hodgkin lymphoma in 13 (21%) and chronic lymphocytic leukaemia in 10 (16.1%). Thirty-five out of 62 (56%) patients were receiving chemotherapy and 29 (46.8%) had undergone HSCT, mainly autologous and unrelated donor transplants. Only 3 (15.8%) of 19 patients with *Influenza* virus had been vaccinated. In 55 (88.7%) patients, empiric antibiotic treatment had been started, and only in 6 of them antibiotics were discontinued after the RV detection. Twenty (35.48%) patients required hospitalization, with an average hospital stay of 12±10.5 days. We identified 8 (12.9 %) cases of nosocomial infection (3 *Influenza*, 2 VPI-3, 1 *Coronavirus*, 1 *Rhinovirus* and 1 RSV). Ten (16.1%) patients developed respiratory failure (6 *Influenza* infections, 2 RSV, 1 PIV-3 and 1 *Rhinovirus*). Five of them presented a bilateral interstitial pattern on chest x-ray. Three (4.8%) patients were admitted to ICU and 2 of them required invasive ventilation. Five (8%) patients developed a bacterial superinfection and two of them developed a fungal superinfection: 1 invasive aspergillosis and 1 case of aspergillar tracheobronchitis. The outcome was favourable in 58 (93.5%) patients. Four patients died during admission, 2 of them in relation with the viral infection.

**CONCLUSIONS:** RV infections are a self-evident problem in patients with HM, and represent a non-negligible rate of nosocomial infection (13%). Sixteen per cent of these patients develop respiratory failure. Preventive measures, such as influenza vaccination, must be tightened in this population in order to reduce the derived morbidity and mortality.