Conclusion. A longer duration of Px is predicted to lead to higher overall costs but increased life expectancy for CMV D+/R− mismatch Ltx patients. Px duration >1 year for these patients may be economically reasonable.

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1572. Conjugate Pneumococcal Vaccination Reduces Invasive Pneumococcal Disease Post Haematopoietic Stem Cell Transplant
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Session: 151. Viruses and Bacteria in Immunocompromised Patients
Friday, October 5, 2018: 12:30 PM

Background. Immunosuppressed patients, especially haematopoietic stem cell transplant (HSCT) recipients, are particularly vulnerable to invasive pneumococcal disease (IPD). However, uptake of pneumococcal vaccination tends to be lower in the immunosuppressed, partly due to concerns of vaccine effectiveness. Our institution introduced protocolised 10- or 13-valent conjugate pneumococcal vaccination (PCV) to all autologous and allogeneic HSCT recipients in 2010 to replace routine 23-valent polysaccharide vaccine (PPV23).

Methods. We conducted a retrospective single-centre observational study of all HSCT recipients from 2004 to 2015 to assess the impact of PCV introduction on IPD incidence. All HSCT recipients were reviewed for microbiological evidence of IPD following HSCT. The pre-2010 group of HSCT recipients who did not receive PCV, were compared with the post-2010 group of HSCT recipients who did receive PCV. Enrolment and compliance with the post-HSCT vaccination protocol was assessed.

Results. Of the 917 HSCT screened for IPD, 14 episodes of IPD occurred in 12 patients between 2004 and 2016. Twelve episodes occurred in the pre-2010 group, 40% of serotyped isolates would have been covered by PCV. Two episodes occurred in the post-2010 group, neither isolate serotype was covered by PCV. There was 90% enrolment and vaccination protocol completion for surviving HSCT recipients. Overall IPD rate reduced significantly from 31.9/1,000 transplants pre-2010, to 3.7/1,000 transplants post-2010 group (P < 0.05). Specific reductions occurred in the autologous transplant group from 26.2 to 2.8/1,000 transplants (P < 0.05) and the allogeneic transplant group from 45.5 to 5.3/1,000 transplants (P < 0.05).

Conclusion. Introduction of PCV resulted in a significant reduction in IPD among our high-risk cohort, demonstrating clinical effectiveness of PCV in HSCT recipients and confirming immunogenicity data. To our knowledge, this is the first study to demonstrate the clinical effectiveness of PCV in this group, highlighting the importance of this vaccination to prevent infectious complications following autologous and allogeneic HSCT. The clinical effectiveness of PCV vaccine is enhanced by the high quality of our post-HSCT vaccination program.

Disclosures. All authors: No reported disclosures.

1573. Disparities Between Premortem and Postmortem Diagnoses of Infectious Diseases Found on Autopsy in Hematopoietic Cell Transplantation Recipients at a High-Volume Academic Transplant Center
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Session: 151. Viruses and Bacteria in Immunocompromised Patients
Friday, October 5, 2018: 12:30 PM

Background. Hematopoietic cell transplantation (HCT) is a potentially curative treatment option for patients with hematologic malignancies and other diseases but carries a significant risk of infection-related morbidity and mortality. Many of these infections are difficult to diagnose and treat. It is not infrequent that HCT recipients die from infection despite extensive investigations and broad-spectrum antimicrobial therapy. Autopsy is the gold standard for establishing the cause of death but rates of performing autopsies are decreasing despite their immense value. We present the most recent case series of infectious diseases found on autopsy in HCT recipients at our institution and compare post mortem diagnoses to premortem clinical diagnoses as documented by the clinical teams.

Methods. We collected stool samples pre- and post-initiation of chemotherapy in anti-biotic-naive patients receiving antineoplastic agents for cancer treatment. Antineoplastic agents included fludarabine, busulfan, cyclophosphamide, mesna and melphalan for induction chemotherapy or conditioning during stem cell transplantation. We performed metagenomic shotgun sequencing on these samples and compared the relative abundance of ARGs pre- and post- treatment initiation. Three thousand and twenty-one ARGs were categorized into 15 functional pharmaceutical classes (by agents used for patient care or environmental cleaning). For group comparisons t-test and/or two-way ANOVA was performed.

Results. Seven patients provided pre- and post samples. Overall there was a trend toward reduction/eradication of ARGs in 10 of 15 of antibiotic resistance gene classes. For the rifampin class no ARGs were noted in either pre- or post-samples. For four of the ARG classes (aminoglycoside, β-lactamase, fosfomycin, multidrug efflux pumps), there was an acquisition or trend toward an increase in ARG abundance.

Conclusion. Cancer chemotherapy agents may be contributory to the acquisition of aminoglycoside, β-lactamase, fosfomycin, multi-drug efflux pump resistance genes in cancer patients. Of note, these genes confer resistance to some of the most important therapeutic or environment cleaning compounds utilized during clinical care. Further studies are warranted and ongoing to confirm these findings and overcome sample size limitations.

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1574. Cancer Chemotherapy May Induce Acquisition of Antibiotic Resistance Genes in Antibiotic-Naive Cancer Patients
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Session: 151. Viruses and Bacteria in Immunocompromised Patients
Friday, October 5, 2018: 12:30 PM

Background. The human gut serves as a critical reservoir for bacteria and plasmsids that encode antibiotic resistance genes (ARGs). Antibiotic exposure contributes to the acquisition of such ARGs; consequently efforts to curtail development of antibiotic resistance focus on minimizing exposure through antibiotic stewardship programs.

Conclusion. The importance of this vaccination to prevent infectious complications following allogeneic and autologous HSCT is enhanced by the high quality of our post-HSCT vaccination program.

Disclosures. All authors: No reported disclosures.