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Session Title : Preoperative evaluation & work up

Vaccination and prophylaxis

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Including lung transplants, solid organ transplant candidates and recipients are at high risk of developing infections. Infection in these patients results in significant morbidity and mortality. For protection of the immunocompromised patient, the vaccination and prophylaxis of infection may be necessary prior to transplantation. Since vaccine responses are generally even more attenuated post-transplantation when the patient is immunosuppressed, the pre-transplant period is an important phase. In addition, live virus vaccines are usually avoided after transplantation. Prior to transplantation, we have to carefully review each patient's vaccination and exposure history and administer any needed vaccinations. Vaccines should be administered as early in the pre-transplant period as possible when the likelihood of developing a protective immune response is highest and when live vaccines can be given safely. Inactivated vaccines include Influenza, pneumococcal, Hepatitis B, Haemophilus influenza, Tetanus, diphtheria, pertussis and COVID-19 vaccine. Vaccination against seasonal influenza virus should be given annually both pre- and post-transplantation. Lung transplant candidates should be vaccinated against Streptococcus pneumoniae. Hepatitis B virus vaccination is indicated for all anti-hepatitis B surface antigen (anti-HBs)-negative solid organ transplant candidates. Haemophilus influenza type b vaccine is generally only recommended for individuals with impaired splenic function and following stem cell transplantation. The tetanus, diphtheria, pertussis vaccines should be given per the same indications and schedules as the general population. Live organism vaccines are generally avoided in the immunocompromised patient, because it can give the potential for active infection. Live vaccines should be given at least four weeks prior to transplantation in immunocompetent patients. Measles, mumps, and rubella infections are rare, but the potential severity of these diseases is well recognized for nonimmunized individuals. Thus, nonimmune adult solid organ transplant candidates should receive Measles, mumps, and rubella vaccination prior to transplantation. Postexposure prophylaxis may be warranted for selected immunocompromised patients who have been exposed to certain pathogens, including varicella-zoster virus, influenza virus, hepatitis B virus, measles virus, meningococcus, rabies virus, and tetanus. Passive immunization and/or postexposure antimicrobial prophylaxis may be warranted for severely immunocompromised patients and/or for those who have not been vaccinated against these pathogens. The incidence of

tuberculosis in transplant recipients increased high over the general population. Thus, lung transplant candidates should undergo screening for latent tuberculosis and pretransplant antituberculosis prophylaxis should be provided for candidates with indications. For lung transplant candidates and recipients, infection is a considerable risk factor for mortality. Furthermore, antimicrobial therapy is often less effective than in the immunocompetent host. Evaluate and minimize the risk of infection in lung transplant candidates through prescreening evaluation is an important part of care.