
Principles and Practice of Transplant Infectious Diseases

Amar Safdar
Editor

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 Springer

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ISBN 978-1-4939-9032-0 ISBN 978-1-4939-9034-4 (eBook)
<https://doi.org/10.1007/978-1-4939-9034-4>

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The registered company address is: 233 Spring Street, New York, NY 10013, U.S.A.

This book is dedicated to my parents, Taj & Safdar, for enduring inspiration and tenacity of purpose.

Preface

In pursuit of recognizing the risk of infection in patients undergoing transplantation, prescient cognizance requires sagacious understanding of hosts' home and healthcare environment, factors pertaining to the level of immune suppression that may have accumulated overtime, and, importantly, recent alterations in immune function resulting from additional immunosuppressive treatments such as donor lymphocyte transfusion, antineoplastic therapy, and immune modulatory biologic drugs and medical disorders like graft-versus-host disease, donor allograft rejection, posttransplant opportunistic malignancies, recrudescent or newly acquired cytomegalovirus infection, and relapsed hematologic neoplasms.

It is prudent to establish a targeted approach toward diagnosis, an approach which portends recognition of the true etiology with the help of assiduous investigation based on patient-specific vulnerability for infection. Special consideration needs to be placed upon the possibility of noninfectious processes that clinically are often difficult to distinguish from infection or sepsis-like syndrome. Toxicity due to commonly used drugs in the posttransplant period, thromboembolic events, acute engraftment syndrome, postsurgical deep tissue and body cavity hematoma, tissue ischemia and necrosis, opportunistic malignancies, and the potential for less common paraneoplastic disorders including tumor fever may initially present as a nonspecific acute febrile illness, with or without features suggestive of systemic inflammatory response syndrome. Similarly, a host of noninfectious maladies involving the skin and skin structures, brain, gastrointestinal tract, liver, kidneys, and lungs may clinically resemble infection. It is important to take into account that such processes may occur concurrently or sequentially in patients with a known infection diagnosis. Furthermore, in immunosuppressed patients after hematopoietic or solid organ allograft transplantation, plurality of simultaneously occurring infections makes selection of targeted, pathogen-specific empiric therapy a daunting task.

Individuals' genetic haecceity and its influence on susceptibility or inherent resistance to certain infections is evolving. Once validated and available for clinical use, this has the potential to reliably identify select subgroups of transplant recipients that are additionally vulnerable to specific infection(s). Infection prevention and empiric or preemptive treatment strategies in such patients may advance from the putative and arbitrary risk profiles presently in use.

This volume aims to provide a comprehensive and in-depth review of the issues pertaining to infectious diseases in patients undergoing transplantation.

El Paso, TX, USA

Amar Safdar, MD

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