In North America we have particularly witnessed revolutionary advances in the management of myeloproliferative disorders (ie the leukemias), continued refinements in the management of certain metabolic disorders (ie diabetes) and successful treatment of organ failure by transplantation. Increased survival rates however have been accompanied by the patients who are either inherently or iatrogenically immunocompromised. Although distinctly different disease entities may be involved, all immunocompromised patients share a common final pathway; that being the development of grave and life-threatening complications in clinical situations which would have been easily treated in patients with a normal immune system.

Sinusitis is not generally thought to be a serious condition but in an immunocompromised host it may ultimately prove lethal as the characteristic findings of purulent rhinorrhea, percussion tenderness, facial pain and edema are subtle or entirely absent. As a result, in this patient population, disease may spread insidiously until a fulminant picture with necrosis and infarction of the mid face, orbital contents and the cavernous sinus has occurred. Early recognition and aggressive treatment is therefore imperative if the patient is to survive.

In this paper we review the common predisposing conditions and the infective clinical entities (ie rhinocerebral mucormycosis, invasive aspergillosis) in the immunocompromised host that frequently involve the paranasal sinuses. Experience gained from the management of sinusitis in the Toronto Hospital's transplantation and hematology units has resulted in the development of specific surgical guidelines for this patient population. Finally as the world becomes a global village, we review some of the intranasal manifestations pertinent to the human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) we have treated.