IMMUNOSUPPRESSORS HAVE A DUBIOUS PAST AND AN UNCERTAIN FUTURE

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Multiple sclerosis (MS) is a generally remitting relapsing disease affecting the white matter of the brain. The disease often causes progressive neurodegeneration eventually leading to significant neurodegeneration. The main hypothesis underlying MS research and treatment has been driven by the animal model, experiment autoimmune encephalo-myelitis (EAE) which assumes a peripheral sensitization of the immune system as the initial event leading to MS. Following the initial success of treating relapses of MS with steroids attempts were made in chronic treatment with steroids which were unsuccessful. This was followed by trials with drugs such as azathioprine and methotrexate which also were considered failures. In the late 1980s a new group of immunomodulatory drugs showed significant beneficial effects in the disease with minimal side effects and have become the mainstay of therapy for the disease. Over the past few years a number of essentially immunosuppressive medications have been approved for treatment of MS. As will be discussed, these medications are significantly more dangerous than the immune-modulators with dangers such as opportunistic infections of the brain and tumors. On the other hand the short term benefits offered by these medications may not be long lasting. A concept of induction therapy with immunosuppressors followed by immunomodulation has been proposed but this too offers many pitfalls.