

## **Thalidomide: Current and Potential Clinical Applications**

L. Calabrese, A. Fleischer. The American Journal of Medicine,2000; 108: 487-495

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### **Abstract:**

More than three decades after its withdrawal from the world marketplace, thalidomide is attracting growing interest because of its reported immunomodulatory and anti-inflammatory properties. Current evidence indicates that thalidomide reduces the activity of the inflammatory cytokine tumor necrosis factor (TNF)- $\alpha$  by accelerating the degradation of its messenger RNA. Thalidomide also inhibits angiogenesis. Recently, the drug was approved for sale in the United States for the treatment of erythema nodosum leprosum, an inflammatory complication of Hansen's disease. However, it has long been used successfully in several other dermatologic disorders, including aphthous stomatitis, Behcet's syndrome, chronic cutaneous systemic lupus erythematosus, and graft-versus-host disease, the apparent shared characteristic of which is immune dysregulation. Many recent studies have evaluated thalidomide in patients with human immunodeficiency virus (HIV) infection; the drug is efficacious against oral aphthous ulcers, HIV-associated wasting syndrome, HIV-related diarrhea, and Kaposi's sarcoma. To prevent teratogenicity, a comprehensive program has been established to control access to the drug, including registration of prescribing physicians, dispensing pharmacies, and patients; mandatory informed consent and education procedures; and limitation of the quantity of drug dispensed. which existing treatments are inadequate. Clinical and, in some patients, electrophysiologic monitoring for peripheral neuropathy is indicated with thalidomide therapy. Other adverse effects include sedation and constipation. With appropriate safeguards, thalidomide may benefit patients with a broad variety of disorders for which existing treatments are inadequate.

### **Comments:**

**Strengths/uniqueness:** The authors do a thorough review of the mechanisms of action and the current and possible uses of thalidomide. They also discuss the adverse effects, including the much-publicized teratogenicity.

**Weaknesses:** It is a narrative review only and does not give an opinion as to the validity of the results of the articles cited.

**Relevance to Palliative Care:** Thalidomide might have a role in the anorexia/cachexia syndrome, as well as in some HIV-associated conditions and as chemotherapeutic agent, but further research is needed to be able to make informed decisions.