Chapter 87

AIDS Wasting Syndrome: Current Concepts in Management

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INTRODUCTION

Since its first recognition in homosexual population in USA, human immunodeficiency virus (HIV) infection has taken the form of a pandemic. Clinical manifestations of HIV infection are varied. HIV infection leads to changes in the body composition. Variable degree of malnutrition has been found in HIV infected patients. During the course of HIV infection patients develop AIDS-related cachexia also known as ‘wasting syndrome’ (WS) which is a chronically debilitating and potentially life threatening metabolic disorder. WS is one of the AIDS defining illnesses listed in Center for Disease Control (CDC), Atlanta guidelines. In this article we present the clinical characteristics and current concepts in the management of WS.

DEFINITION

WS is a term employed for AIDS-related cachexia. Cachexia has been described since ancient times as: “….the shoulders, clavicles, chest and thighs melt away. This illness is fatal…..” —Hippocrates (460-370 BC)

CDC defined WS in 1987 as loss of >10% of baseline body weight plus chronic diarrhea (at least 2 stools per day for ≥ 30 d) or chronic weakness and documented fever (for ≥ 30 d, intermittent or constant) in the absence of a concurrent condition illness or conditions other than HIV infection that could explain the findings (e.g. tuberculosis, cancer, isosporiosis, cryptosporidiosis, or other specific enteritis).

PATHOPHYSIOLOGY

Pathophysiology and development of WS is multifactorial. Dysregulation in the levels of various molecules including cytokines, myostatin, insulin like growth factors, testosterone and adrenal hormones have been implicated. Various co-morbid medical conditions affect its development. Flow diagram (Fig. 1) depicts the mechanism of development of WS and its manifestation.

CLINICAL MANIFESTATIONS

Ongoing reduction in lean body mass is the result of body cell mass as well as the extra-cellular matrix. This leads to extreme weakness, an inability to perform simple tasks, reduced health related quality of life (HR-QOL), secondary immune dysfunction, organ failure and death.

WASTING SYNDROME IN THE ERA OF HAART

Introduction of HAART has led to significant reduction in morbidity and mortality. WS continues to occur, though the incidence of WS has reduced by approximate 50%. The percentage of persons with WS at the time of their AIDS diagnosis has increased during 1992 through 1997, with the highest percentage in 1997. One study showed that > 50% of HIV infected patients with WS were receiving HAART. Though, the characteristic and predictor of WS has changed. WS seen in the HAART era represent gradual loss of lean body mass without severe weight loss as compared to catastrophic weight loss seen in pre-HAART era. One study has shown that predictors of WS in the pre-HAART era (1988-1995) such as fatigue, anemia, and lower than expected CD4 cell count no longer predict WS in the HAART era (1996-1999). Various mechanism including the disturbances of cytokine milieu by HIV has been proposed. Shikuma
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**FUTURE TRENDS**

Recently, somatotropin has been advocated for management of WS. At a dosage of 0.1 mg/kg/day subcutaneous administration for 12 weeks, it has been shown to increase work output, body weight, lean body mass and improved HR-QOL, as compared to placebo. Its tolerability profile is manageable. However, long term efficacy and tolerability, cost effectiveness, optimum dosage, management of patient after 12 weeks therapy, maintaining the gained lean body mass and possibility of a maintenance dose remains to be determined.

**REFERENCES**


