

# Prednisolone in Alcoholic Liver Disorder

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**Abstract:****Aim and objective:**

Alcohol is leading cause for liver disease and is associated with morbidity and mortality. Several factors including the amount and duration of alcohol consumption affect the development and progression of alcoholic disorder. Alcoholic hepatitis is a devastating acute form of alcoholic liver disease (ALD). Prednisone for alcoholic liver disease is an effective medication and it improves short term survival in patients.

**Background:**

Alcoholic hepatitis is a clinical syndrome characterised by jaundice and liver impairment that occurs in patients with a history of heavy and prolonged alcohol consumption. The short-term mortality among patients with severe disease exceeds 30%. Prednisolone and pentoxifylline are both recommended for the treatment of severe alcoholic hepatitis, but uncertainty about their benefit persists.

**Result:**

Prednisolone was associated with a reduction in 28-day mortality that did not reach significance and with no improvement in outcomes at 90 days or 1 year. Prednisolone Reduced mortality, improved risk-benefit. Treatment with Prednisolone improves the short term survival of patients with severe biopsy proved alcoholic hepatitis.

**Keywords:**Alcoholism,Alcoholic hepatitis,alcoholic liver disease,Prednisolone.

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**INTRODUCTION:**

Alcoholic hepatitis is a clinical syndrome characterized by jaundice and liver impairment that occurs in patients with a history of heavy and prolonged alcohol use. Alcoholic hepatitis has a high risk of short term mortality rate. The effect of corticosteroids in the treatment of alcoholic hepatitis reduced the short term mortality. The short-term mortality among patients with severe disease exceeds 30%. Prednisolone is used for the treatment of severe alcoholic hepatitis, but uncertainty about their benefit persists.

**PATHOGENESIS:**

Corticosteroids stimulate the appetite and increase the production of albumin and inhibit the production of collagen type I and IV. They affect the immune process in the initiation or perpetuation of alcoholic hepatitis. The progression of hepatic injury is important, because hepatic failure may progress despite the discontinuation of alcohol intake. Corticosteroids decrease the cytokine production which play an important role in the pathogenesis of alcoholic hepatitis.

**ADVERSE EVENTS INCLUDING DEATH:**

Serious adverse events were reported in 42% of the patients, with an equal distribution in each of the treatment groups, and 20% of all serious adverse events resulted in death. Infections were less in the patient groups who received prednisolone as compared with patient groups who did not receive Prednisolone. Infection accounted for 24% of the deaths, with similar numbers reported for the groups receiving prednisolone and those not receiving prednisolone. The occurrence of gastrointestinal bleeding, sepsis, or renal failure before randomization did not affect mortality during the trial.

**SURVIVAL:**

Statistically it is shown that patients treated with corticosteroids had better response than those who are not treated with corticosteroids. Prednisolone was associated with a reduction in 28-day mortality that did not reach significance and with no improvement in outcomes at 90 days or 1 year. Prednisolone improve survival in patients with alcoholic hepatitis

**IMMUNOLOGICAL STUDY:**

Four different activation parameters were used to monitor PMN functions during treatment. The expressions of two adhesion molecules, the  $\alpha$ 2 integrin CD11b-CD18 and the L-selectin CD62-L, were quantified by using specific monoclonal antibodies and flow cytometry as previously described. Oxidative burst was evaluated by the dichlorofluorescein diacetate oxidation assay. Finally, the interleukin 8 (IL-8) production capacity was tested by enzyme-linked immunosorbent assay on the supernatants of highly purified PMN cultured for 24 hours. These four techniques were performed on PMN both at basal state and after ex vivo stimulation with a bacterial-derived product, lipopolysaccharides, or formyl methionyl leucyl phenylalanine to check the ability of PMN to be stimulated further in vitro.

**TREATMENT:**

To make progress in the management of patients with severe AH, at least 3 approaches might be useful: (1) the evaluation of new therapies such as anti-tumor necrosis factor- antibodies or pentoxifylline as proposed by some investigators; (2) early identification of patients who will not benefit from corticosteroids; and (3) earlier selection of candidates with severe Alcoholic hepatitis who might be listed for liver transplantation. The administration of 40 mg of prednisolone daily for 1 month may have a beneficial

effect on short- term mortality but not on the medium-term or long-term outcome of alcoholic hepatitis.

#### **DRAWBACK:**

A recognized drawback of glucocorticoid use in patients with alcoholic hepatitis is increased susceptibility to infection. The higher rate of infection among the patients treated with prednisolone was therefore expected, but mortality attributed to infection was similar across the groups, regardless of whether prednisolone was administered. Since infection plays such an important role in the outcome of alcoholic hepatitis, the addition of N-acetyl- cysteine to prednisolone was associated with a reduced rate of infection.

#### **CONCLUSION:**

Treatment with Prednisolone improves the short term survival of patient with severe biopsy-proved alcoholic hepatitis. Improved risk benefit profile and renoprotective effect of Prednisolone in treatment of severe alcoholic hepatitis were noted.

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