

Role of Ursodeoxycholic Acid in lowering ALT in Chronic Liver Disease

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Abstract

The objective was to see the efficacy of ursodeoxycholic acid in improving the ALT levels in patients suffering from chronic liver disease.

Thirty patients suffering from chronic liver disease (either B or C) were given oral ursodeoxycholic acid in a dose of 250 mg twice a day for 4 months. Their blood biochemistry and haematology were repeated monthly for 7 months i.e. 4 months of therapy and 3 months post therapy to see the response.

The mean ALT levels of 30 patients who completed the study was 101 ± 47 IU/L. During therapy 24 cases (80%) showed lowering of their ALT levels while 6 (20%) either showed no response or worsening of ALT levels. Of 24 cases who showed an improvement in their ALT levels; over 25% drop in ALT levels was seen in 217 cases (70%) and less than 25% drop seen in 7 cases (30%). The mean ALT values during therapy were 75 IU/L showing an overall 25% reduction from the baseline values. Following cessation of therapy the mean ALT levels showed a rise to 90 IU/L which was almost similar to 101 IU/L value in the pre treatment period.

The study showed some role of ursodeoxycholic acid in improving the ALT levels in chronic liver disease.

Introduction

Treatment of chronic viral associated liver disease with interferon and Ribavarin is often long-term with less than 50% sustained response in majority of the cases. The treatment has too many side effects and is expensive.¹⁻³ There is about 20-30% population with chronic liver disease who are either unfit for interferon treatment or are non affording. A search for alternative drugs for these patients was made, which if were not antiviral could at least lower the hepatic inflammation and thus lower the ALT levels. Ursodeoxycholic acid has been found to reduce the ALT

levels in primary biliary cirrhosis, primary sclerosing cholangitis and liver disease related to cystic fibrosis.⁴⁻⁷ Recently its role in lowering ALT levels in chronic hepatitis C related liver disease has also been reported.⁸⁻¹⁰

Crosignani et al.¹⁰ used varying doses of ursodeoxycholic acid in patients suffering from chronic hepatitis C and found that a dose of 4mg/kg/day was significant enough in improving indices of liver dysfunction. Japanese workers also used varying doses of ursodeoxycholic acid in patients suffering from chronic HCV related liver disease, and reported that 600 mg/day was better than 900mg/day in improving the liver functions in these patients.¹¹

The present study was done to see the response of 500mg of ursodeoxycholic acid daily in improving ALT levels in patients suffering from chronic liver disease.

Patients, Methods and Results

Thirty adult patients of either gender suffering from chronic liver disease and attending our outpatient department were selected for the study. Informed consent was taken from all the patients. Diagnosis of chronic liver disease was made on abnormal ALT levels for over 6 months along with either signs of portal hypertension or decompensation or low albumin or raised prothrombin time. Markers were either positive for HBV or HCV. Demographic profile of all patients was entered in the standard proforma. Patients taking any antiviral therapy or enzyme inducers in the last 6 months were excluded. All patients were given 250mg of capsule ursodeoxycholic acid (Urososalk Dr. Falk/AFD/AGP) twice a day for 4 months. Blood CP and LFT's were done monthly for 7 months i.e. 4 months during therapy and 3 months after cessation of therapy. Clinical evaluation was done monthly for 7 months. Response to therapy was evaluated on the mean drop of ALT during therapy and post therapy.

Of 37 patients selected for the study 30 completed the study while 7 were lost to follow-up. Of 30 patients, there were 16 female and 14 males whose ages ranged from 25-58 years with a mean of 39 years. Majority (23 patients) was suffering from chronic HCV infection, 2 had chronic HBV infection and 5 were both markers negative. None of the patients were alcoholics.

Prior to the initiation of the therapy mean ALT levels were 101 ± 47 IU with a range of 57-268 IU. During 4 months of ursodeoxycholic acid therapy the mean ALT levels in 24 patients dropped by 25% with the mean value of 75 IU, while the ALT values increased in 6 patients. Post therapy the mean ALT value increased to 90 IU after 3 months of cessation of therapy. Of the 6 patients with a rise in ALT values during therapy only 2 patients showed a drop in ALT following discontinuation of the drug after 4 months while in 4 patients it continued to rise even after cessation of therapy.

Of 24 patients who had a drop in ALT levels during therapy 7 patients showed a 25% drop in their mean ALT levels, 13 had around 50% drop and 4 showed over 50% drop in ALT levels. Over 25% drop was seen in 17 patients (70%).

HBV, HCV infection, state of decompensation or portal hypertension, albumin and prothrombin time did not show any association with the response and neither did the gender of the patient influence the response. Blood haematology remained limits in all cases. During therapy most of the patients (23) felt relief in hepatic pain (pain in right hypochondrium) and had improvement in appetite. In none of the patients the drug had to be withdrawn because of the side effects. Two patients complaint of aggregation of abdominal pain but continued the therapy as their LFT's were improving.

Conclusion

In Pakistan, where the cost of therapy has to be borne by the patient and the sustained response to interferon therapy is not more than 50% and with its obvious side effects, make this therapy of limited use in some patients. In patients who are non affording, who are unfit to receive interferon therapy because of various reasons and those who are non responders or relapsers following interferon therapy, may be given a trial of ursodeoxycholic acid. As most patients with HCV infection also have abnormal glu-

cose metabolism or are frankly diabetic or have raised cholesterol, these individuals are very likely to show an improvement in their ALT levels while receiving ursodeoxycholic acid. Improvement in ALT levels seems to have a dual effect on patients suffering from chronic HCV infection; they feel well and their quality of life improves once their ALT levels come down. Most patients also felt that their right hypochondriac pain (probably secondary to fatty liver) improved while they were taking the medicine.

It is concluded that ursodeoxycholic acid is effective in lowering ALT levels in patients suffering from chronic liver disease and the response is both subjective (alleviation of hepatic pain) and objective (lowering of ALT levels). ALT levels went up on discontinuation of therapy indicating that the response was actually drug induced and not natural ALT fluctuations.

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