



## Atorvastatin Induced Cholestatic Hepatitis - A Case Report

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### ABSTRACT

*New status of the women, which is largely being focused on the economic dimensions, has perhaps created a new era for them. Women entry into the employment of course would increase the economic and social status of the family. Earning by them is not a new concept. Women in the rural and tribal areas and from lower status of the society have been working since long for wages in fields and factories. Recently the scenario has been changed with the participation of the females of middle and upper classes in the world of employment. So the issues related to the working women are given due importance in the society at large. A sample of 300 women of two groups i.e. employed and unemployed (150 each) from Ghaziabad City was selected randomly on the basis of three categories of educational qualification i.e. Undergraduates, Graduates and Post – Graduates. A sample size of 50 was selected in each of these three categories. The women selected for the present study were married and of the age group of 24 – 45 years. The data were analyzed with the help of inferential statistics, t – test and EDA, using SPSS 16.0 and results revealed that employment plays a pivotal role in enhancing the self of the women. Employment leads to high level of self – esteem in women than their unemployed counterparts, An interesting fact emerges out of this study is that qualification besides employment is more important factor in boosting one's self-esteem. While the employed women appear to have significant difference in confidence. The employed women appear to have significant difference in confidence level in comparison to unemployed. And finally the self – actualization tendency is found more in unemployed women than employed, in all the three categories of employed / unemployed sample.*

**KEYWORDS :** Atorvastatin; Cholestatic hepatitis

### Introduction

Atorvastatin is a commonly used and well tolerated hypolipidemic drugs to decrease the incidence of atherosclerosis, ischaemic cerebrovascular disease and peripheral vascular disease. It belongs to the class of statins or HMG-CoA reductase inhibitors. This enzyme catalyses the conversion of HMG-Co A to mevalonate, an early and rate limiting step in cholesterol biosynthesis. It is usually well tolerated with some non serious side effects like gastrointestinal disturbance but clinically significant hepatotoxicity is usually rare.<sup>1</sup>

### Case Report

A 60 year old male presented with yellowness of eyes since 10 days. He was non alcoholic, non diabetic and non smoker. There was no history of abdominal pain, loose stools and fever. Past history revealed that he was a case of coronary artery disease treated with antiischemic drugs, LMWH, atorvastatin 20mg and aspirin since 2 months. Cardiovascular, respiratory, gastrointestinal and Central nervous system examination revealed no abnormality. On examination he had jaundice. Laboratory investigations including haemogram, renal, lipid profile revealed no abnormality. Cardiac biomarkers were negative. ECG showed non ST segment myocardial infarction. Liver function tests revealed S.bilirubin 12.7 mg/dl (conjugated 8.4 mg/dl and 4.3 mg/dl unconjugated), SGOT 110 IU/L, SGPT 90 IU/L, S.alkaline phosphatase 1530 IU/L. Viral markers for hepatitis A, B, C, E were negative. Ultrasound abdomen and CT abdomen revealed no abnormality. In view of history, clinical examination and investigations, a diagnosis of drug induced possibly atorvastatin cholestatic hepatitis was made. So atorvastatin was stopped immediately and there was some clinical improvement in jaundice and liver function tests (LFT). After one month of withdrawal of atorvastatin, patient's LFTs become normal. Again the patient was rechallenged with atorvastatin following which patient developed abnormal LFTs and jaundice thus confirming the diagnosis.

### Discussion

Statins are now most commonly used cholesterol lowering agents in patients with cardiovascular disease with good safety profile. But they can induce liver toxicity which is not related to the presence of

pre-existing liver abnormalities, mostly non alcoholic fatty liver disease (NAFLD)<sup>2</sup>. On the contrary statins have been shown to be useful in NAFLD patients<sup>3</sup>. Statin induced liver toxicity was confirmed with rechallenge in 3 of the 73 cases studied by Bjornsson et al<sup>3</sup>. Statins induced liver injury patients when offered alternate statin did not develop recurrence of liver injury<sup>4,5</sup>. Cohen et al has reported that statins can be safely given in patients of NAFLD, chronic liver disease and compensated cirrhosis<sup>6</sup>. Safety of statin therapy has also been proved by Rzouq et al<sup>7</sup>. Contraindications to the use of statin therapy include acute liver failure, decompensated liver disease and colestasis because most statins are excreted in bile which may lead to toxicity<sup>8</sup>. Our patient was also taking aspirin which may be associated with direct dose dependent hepatotoxicity (rather than idiosyncratic form). This occurs at anti-inflammatory doses and is uncommon with antiplatelet doses.<sup>9</sup>

The temporal association between administration of atorvastatin in usual therapeutic doses and the onset of abnormal liver functions within 2 months after administration, the resolution of symptoms and near normal LFTs within 1 month after withdrawal strongly suggests that atorvastatin was the real culprit for this hypersensitivity form of self limited acute liver injury.

### Conclusion

Statin induced cholestatic hepatitis can be confirmed on rechallenge which was done in our case. Statin induced liver toxicity is a rare adverse effect. The case is presented here to sensitize the physicians regarding occurrence of rare adverse effect of statin induced cholestatic hepatitis.

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