

Hepatoprotective Effect of Liv.52 on Antitubercular Drug-induced Hepatotoxicity in Rats

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SUMMARY

Liv.52, a polyherbal Ayurvedic formulation, exhibited hepatoprotective function when tested against chronic antitubercular drug treated rats. Suppression of GSH and antioxidant enzymes (superoxide dismutase, catalase, GPX and GST) were noticed in the liver of antitubercular drug treated animals, accompanied with an increased production of lipid peroxides. Liv.52 afforded hepatoprotection by inhibiting lipid peroxide production and, as a result, the animals showed improved antioxidant status.

Drug induced hepatotoxicity is a potentially serious adverse effect of antitubercular drugs. The present study was designed to evaluate the hepatoprotective effect of Liv.52 against chronic antitubercular drug treated rats. The study was conducted in Wistar albino rats. The rats were divided into four groups: control, pyrazinamide (PZA) treated, PZA treated + Liv.52, and PZA treated + Liv.52 + Ascorbic acid. The rats were treated with PZA (100 mg/kg) for 30 days. The levels of GSH, SOD, CAT, GPX, GST, and lipid peroxides were measured in the liver. The results showed that PZA treatment significantly reduced GSH levels and increased the levels of SOD, CAT, GPX, GST, and lipid peroxides. The addition of Liv.52 significantly restored GSH levels and reduced the levels of SOD, CAT, GPX, GST, and lipid peroxides. The addition of Ascorbic acid also significantly restored GSH levels and reduced the levels of SOD, CAT, GPX, GST, and lipid peroxides. The results suggest that Liv.52 has a hepatoprotective effect against PZA induced hepatotoxicity in rats.

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Liv.52 is an Ayurvedic formulation containing a combination of natural herbs and minerals. It is a natural antioxidant and has been shown to have hepatoprotective effects in various animal models. The present study shows that Liv.52 has a hepatoprotective effect against PZA induced hepatotoxicity in rats.

RESULTS AND DISCUSSION

An a s t r e a d w i t h t h e c o m b i n a t i o n o f M e t h i o n e a n d y a z n a d e s i g n i f i c a n t i n c r e a s e i n t h e r e o x d e c o n t e n t s, a n d a s n i f i c a n t d e c r e a s e o n S e, A l e P X a n d S e a c t i v i t i e s. A s o t h e r a n o m e r e t r e w a s s n i f i c a n t y r e d u c e d. A r e a t e n w i t h L . 52 (500 / , . 0 .) s n i f i c a n t y o d i f e r e n c e i n a o x c o n t e n t o f t h e a n t i b i o t i c a d d s. A s s i g n i f i c a n t a b o v e t h e n o m e d a a r e s b e n a o s t r e s o r d o n o a a r e s.

L . 52 a f f o r d s o p e c o n a a n s i d e r o x d a t o n b y i n c r e a s i n g o c c u r r e n c e o f t h e r e x a c t s o f *Cichorium intybus* a n d *Solanum nigrum* (c o n s t e n t s o f L . 52) a r e b e e n r e o r d o c o n a n a n y o y i n o c c o o p d s, a n y f a o n o d s. A n t o x d a n t a c t i v i t y o f t h e r e x a c t a y t h e r e f o r e b e d e t e r m i n e s e n c e o f o y i n o c c o n s t e n t s .

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