

New therapy for chemotherapy-induced hepatic failure in leukemia; a randomized double-blind clinical trial study

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Abstract:

Introduction: Hepatotoxicity is usual toxicity after chemotherapy in a cute lymphoblastic leukemia (ALL) patients. Conventional treatment methods such as supportive care did not have an effective role in the improvement of hepatotoxicity.

Objectives: In this study clinical efficacy of milk thistle in contrast with placebo was compared in leukemia patients with chemotherapy-induced hepatotoxicity. **Patients and Methods:** In this double-blind study, 93 ALL patients with chemotherapy-induced hepatotoxicity were randomized to a clinical trial with milk thistle or placebo. Liver enzymes level evaluated during 70 days. We divided patients randomly into two groups. Milk thistle at dosage of 7 mg/kg daily was prescribed in the intervention group while in the control group, placebo pills similar to milk thistle in shape and color were prescribed daily.

Results: At day 35 and day 70 of the study, in the milk thistle arm ALT and AST mean serum levels were lower than the placebo group ($P < 0.001$). In the milk thistle group there was a significant reduction in mean of AST and ALT during the first 35 days in patients who were taking livergol in comparison to next 35 days that patients stopped taking it. Children's age was between 3-15 years.

Conclusion: Based on our results, milk thistle improves liver function in chemotherapy-induced hepatotoxicity and there was no need for dose reduction or discontinuation of chemotherapy. Future clinical trials should be conducted to explore long time effect of livergol in leukemia patients and to determine if there is any need for prophylactic administration of antioxidants. **Trial Registration:** This clinical trial has been approved by the Iranian Registry of Clinical Trials at 2018-02-14.

Biography:

Farid Ghazizadeh is a professor assistance at Urmia university of medical science.

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