

Abstract

Background: Gastric cancer is one of the most prevalent cancers throughout the world. its prevalence is quite high in iran and specifically in ardabil, and the five-year survival in patients who are diagnosed within the final stages of gastric cancer is very low. Gastric cancer has a limited response to the currently available treatment methods and is often resistant to the chemotherapy. Thus nouvelle treatment approaches are highly required in gastric cancer management. Utilizing the new compounds in the relevant signaling cascade can increase the survival and prohibit devastating impacts of the previous medications.

Aim: this study the impact of the ascorbic acid in the expression of the micro RNAs of 508 and a19 pertaining to the medication resistance in MKN-45 gastric cancerous cells resistant to 5-FU

Materials and Methods: This study uses the 5-FU resistant MKN-45 cell lines in comparison with the control group. IC50 value was investigated by MTT test. IC50 in 48 hours and the rate of expression miR-508 and miR-19 was investigated by real time PCR

Results: The IC50 value was determined with different concentrations of ascorbic acid in MKN-45 cells, and in this study, we showed that a concentration of 7.5 millimolar significantly reduced cell viability compared to the control group. Furthermore, the evaluation of miR-19a and miR-508 expression showed that ascorbic acid increased the expression of miR-508 and decreased the expression of oncogenic miR-19a. $p < 0.05$ was considered statistically significant.

Conclusion: The findings of this study have shown that the use of high doses of ascorbic acid can be effective in reducing drug resistance to 5-fluorouracil in the treatment of patients with stomach cancer.

Key words : Ascorbic Acid , MicroRNA ,Gastric Cancer,5-FU