Spasmolythic Effect of Ferula Assa-foetida on Acetylcholine Induced Contraction in isolated rat’s ileum

Saeideh Jalali¹, Seyed hassan hejazian²

1- Student of pharmacy department, School of pharmacy, Shahid Sadoughi University of Medical Sciences and Health Services, Yazd, Iran.

2- Dept. of Physiology, Herbal Medicine Research Center, School of Medicine, Shahid Sadoughi University of Medical Sciences and Health Services, Yazd, Iran.

Abstract: One of the herbal plant which is used for treatment of gastrointestinal disorders is Ferula, that is exudated from its root and grows wildly in south and central mountains of Iran. In this study, Spasmolythic Effect of Ferula Assa on Acetylcholine Induced Contraction in isolated rat’s ileum was investigated. In this study, Spasmolythic effect of Ferula was investigated in isolated rat’s ileum in three doses. In experimental procedures, the tissue samples were suspended from the transducer lever, mounted in the organ bath containing Tyrode’s solution and isotonic responses were recorded by using an isotonic transducer and the amplitude of contractions induced by acetylcholine (10⁻⁴ M) before exposing tissue by saline and different concentrations of Ferula. The effect of Ferula and saline on isotonic contraction were tested on different concentrations. Our findings showed that Ferula has significant spasmolytic action against 10⁻⁴ M Ach. In spasmolytic evaluation, Ferula in concentrations of 0.2% and 0.3% significantly reduced Ach (10⁻⁴ M) induced contractions. Exposure to the 0.2% and 0.3% Ferula, reduced the percentage of maximum contraction induced by 10⁻⁴ M Ach to 43% and 12% respectively, which this reduction was statistically significant (P < 0.005). The results of the present study, supports the traditional claim of Ferula as an spasmolytic therapeutic.

Keyword: Ferula, ileum, isotonic contraction, acetylcholine, spasmolytic