SHORT COMMUNICATION

HOMOCYSTEINE-INDUCED AUGMENTATION OF SPONTANEOUS CONTRACTION OF ISOLATED GUINEA PIG MYOMETRIUM

Ahmet Ayar¹,², Niyazi Tug², Husnu Celik², Mete Ozcan³, Oguz Ozcelik³

Firat (Euphrates) University, Faculty of Medicine, Departments of ¹Pharmacology, ²Obstetrics and Gynaecology, ³Biophysics, TR-23119 Elazig, Turkey


Recent studies have suggested association between the elevated homocysteine levels and pregnancy complications. The aim of this study was to investigate the effects of homocysteine on spontaneous contractions of myometrium isolated from pregnant guinea pig. Full-thickness myometrial strips were obtained from late-pregnant guinea pigs following decapitation, and suspended in an organ bath which was filled with physiological saline solution (pH 7.4), maintained at 37°C and continuously bubbled with 95% O₂ and 5% CO₂. After the observation of spontaneous contractions under one gram of resting tension, homocysteine (0.2, 0.5 and 1 mM) was added to the organ bath and effects of this agent on frequency and amplitude of contractions were evaluated in 20-min periods. One-way analysis of variance was used for statistical analysis of the data. Homocysteine caused increase in both frequency and amplitude of spontaneous contractions in a dose-dependent manner.

The results from this in vitro study indicate that cardiovascular risk factor homocysteine has contracting pharmacological effects on guinea pig myometrium.

Key words: homocysteine, myometrium, spontaneous contraction, guinea pig

# correspondence; e-mail: aayar@firat.edu.tr