BACKGROUND: Adrenomedullin (AM) is a pluripotent peptide first discovered from human pheochromocytoma. AM expression has been shown in various cancer types including endometrium cancer. Bcl-2 is an antiapoptotic protein which might be regulated by AM in hypoxic conditions. The aim of the present study was to investigate the role of AM and Bcl-2 expressions in carcinogenesis of type-1 endometrium cancer.

MATERIALS AND METHOD: Study group consisted of 10 proliferative endometrium, 22 simple endometrial hyperplasia, 23 endometrial intraepithelial neoplasia (EIN) and 30 Grade 1 endometrioid adenocarcinoma patients. AM and Bcl-2 expressions were investigated by immunohistochemistry.

RESULTS: Mean AM Allred score was 3±2.6, 5.6±1.6 and 5.7±2.5 in benign, EIN and adenocarcinoma groups, respectively. AM expression was significantly higher in EIN and adenocarcinoma groups than in benign endometrium group (p<0.05). Mean Bcl-2 Allred score was 6.4±2.1, 5.2±2.6, 2.3±2 in benign endometrium, EIN and adenocarcinoma groups, respectively. Mean Bcl-2 Allred score was similar between benign endometrium and EIN groups (p>0.05). However, it was significantly lower in adenocarcinoma group (p<0.05). An inverse correlation between AM and Bcl-2 expressions was found (r: -0.4, p<0.001).

CONCLUSIONS: Our findings showed that AM expression increased in progression from benign endometrium to EIN and type-1 adenocarcinoma while expression of Bcl-2 decreased in transition from EIN to carcinoma.