

Oral Abstract 1: A cohort study assessing the impact of glucagon-like peptide-1 receptor agonist use on BMI and weight loss for patients with endometrial intraepithelial neoplasia and low-grade endometrial cancer.

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Topic
Endometrial

Objectives

To evaluate the effectiveness of glucagon-like peptide-1 receptor agonists (GLP-1 RA) in promoting weight loss among patients diagnosed with endometrial intraepithelial neoplasia (EIN) and low-grade endometrial cancer (EMCA). Secondary objectives include impact on final pathology.

Methods

This is a single-institution retrospective cohort study of patients with biopsy proven EIN or grade 1 EMCA treated between January 1, 2022 and December 31, 2025. Demographic and clinical data were abstracted from the electronic medical record. Descriptive statistics were used to summarize patient characteristics. Comparative analyses were performed using two-sample t-tests with equal variance for continuous variables and Pearson chi-squared tests for categorical variables.

Results

A total of 160 patients with EIN or grade 1 EMCA were included during the study period, of whom 116 (72.5%) had EIN and 44 (27.5%) had EMCA. Among 116 patients with EIN, 35 (30.2%) were initiated on GLP-1 RA for weight loss or diabetes management; 13 (11.2%) began therapy at the initial visit, while 22 (18.9%) initiated treatment at a subsequent visit. Compared to controls, GLP-1 RA use in the EIN cohort was associated with a clinically significant reduction in BMI (-3.1 kg/m² [95% CI, -5.0 to -0.10] vs -0.87 kg/m² [95% CI, -1.53 to -0.20] $p < 0.001$) and total body weight (-7.4 kg [95% CI, -14.3 to -0.42] vs -0.84 kg [95% CI, -2.80 to 1.12] $p = 0.03$). In the 44 patients with EMCA, 15 (34.1%) were initiated on GLP-1 RA, including 6 (13.6%) at the initial visit and 9 (20.5%) at a later point. Reduction in BMI (-2.1 kg/m² [95% CI, -4.6 to 0.35] vs -0.21 kg/m² [95% CI, -0.99 to 0.56] $p = 0.05$) was statistically significant when compared to controls, however total weight loss (-6.3 kg [95% CI, -15.5 to 2.84] vs -0.26 kg [95% CI, -1.93 to 1.42] $p = 0.06$) was not. Among EIN patients, clearance occurred in 62.9% with GLP-1 RA similarly to 61.7% without GLP-1 RA ($p = 0.91$). Among EMCA patients, clearance occurred in higher proportion of patients with GLP-1 RA 53.3% compared to 17.2% without GLP-1 RA ($p = 0.02$).

Conclusions

Patients with EIN who were started GLP-1 receptor agonists had significantly greater decrease in BMI and overall weight loss than patients who were not started on GLP antagonists. This was not observed for patients with EMCA. Decrease in BMI and weight loss did not translate to greater clearance of EIN, however there may be specific benefit when applied to EMCA.