IMPACT OF BODY MASS INDEX AND WEIGHT CHANGE ON RISK OF RECURRENCE IN PATIENTS TREATED FOR ENDOMETRIAL ADENOCARCINOMA

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Background: Obesity is a well-documented risk factor for EAC, but the relationship between obesity and disease recurrence is controversial. Additionally, body weight is an inherently dynamic variable and no studies have examined the relationship between interval weight change and risk of EAC recurrence.

Objectives: To identify if there is a relationship between body mass index (BMI) or interval weight change and the risk of disease recurrence among women treated for EAC.

Methods: We conducted a retrospective chart review of 337 women diagnosed and treated surgically for EAC at UMass Memorial Medical Center from 2010 to 2015. The effect of BMI on risk of disease recurrence was assessed by Cox proportional hazards model adjusting for age, FIGO stage, myometrial invasion, lymphovascular space involvement and status of adjuvant therapy. The effect of interval weight change on EAC recurrence was assessed using logistic regression, adjusting for BMI and recurrence free interval.

Results: Among 337 women diagnosed with EAC, mean BMI at diagnosis was 35.9 pounds (SD: 8.9), mean weight at diagnosis was 201.5 pounds (SD: 52.7) and mean interval weight change was -8.1 pounds (SD: 18.8). At time of data extraction there were 19 patients (5.7%) with disease recurrence. The hazard ratio for recurrence in women with BMI >50 was 11.4 [95%CI: 1.54-84.05] times that of women with BMI<30 (p=0.02). Women who maintained or gained weight following primary surgical resection had no increased risk of recurrence compared to those who lost weight [OR: 1.02, 95%CI: 0.27-3.82] (p=0.97).

Conclusion: Women with extreme obesity at diagnosis are more likely to have disease recurrence following primary surgical treatment for endometrial adenocarcinoma. However, women who lose weight following primary surgical treatment of EAC are just as likely to have disease recurrence as those who maintain or gain weight.

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