A CASE-CONTROL STUDY OF ADIPOKINES IN ENDOMETRIAL CANCER AND CORRELATION WITH PROGNOSTIC FACTORS

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Objectives Adipokines like leptin and adiponectin play an important role in inflammation, angiogenesis, apoptosis and tumourgenesis. Such adipokines are postulated to play a role in development of obesity related cancers like endometrial cancers. We aimed to study the serum levels of leptin and adiponectin in cases of endometrial cancers and normal controls.

Methods A prospective case control study was conducted to study the serum levels of leptin and adiponectin in endometrial cancer patients and normal controls over a period of 24 months.

Results Fifty-five cases of endometrial cancers and 25 controls were included in this study. Median serum levels of leptin among cases and controls were 59.7 (16.0–483.5) ng/ml and 38.0 (4.7–107.2) ng/ml, respectively (p=0.015). Median serum adiponectin levels among cases and controls were 8481.4 (1700.7–24956.28) and 9547.5 (3015.0–24257.0) ng/ml, respectively (p=0.906). Leptin:adiponectin (L:A) ratio was significantly higher in cases than in controls (0.0086 v 0.0042, p=0.014). Due to high standard deviation of values from mean, leptin, adiponectin and L:A ratio were analysed in tertiles among cases and controls. Only age and BMI were significantly correlated with higher tertile of serum leptin and L:A ratio. Prognostic indicators like grade, stage and myometrial invasion were not correlated with leptin and adiponectin tertiles. Since lymph node metastasis was less common in our cohort, correlation with adipokines was not possible.

Conclusions Higher levels of serum leptin and lower levels of serum adiponectin seem to be positively correlated with cases of endometrial cancer. Adipokine levels did not show a correlation to histological prognostic markers.

EP119/#992

EP120/#1082

COMPARING THE SURGICAL OUTCOMES OF ROBOTIC VERSUS LAPAROSCOPIC SURGERY IN THE TREATMENT OF ENDOMETRIAL CANCER FOR MORBIDLY OBESE PATIENTS

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Objectives Compare the surgical outcomes of robotic versus laparoscopic surgery in the treatment of endometrial cancer for morbidly obese patients.

Methods A retrospective analysis of obese patients who underwent robotic assisted hysterectomy with lymphadenectomy (RHLND) was compared to patients who underwent a total laparoscopic hysterectomy with lymphadenectomy (LHLND) for treatment of endometrial cancer. Estimated blood loss (EBL), operative times, intraoperative and postoperative outcomes, number of pelvic (PLN) and paraaortic (PALN) lymph nodes retrieved and rate of conversion to open laparotomy were analyzed. Fisher Exact tests or two tailed t-tests was performed to evaluate for difference.

Results Total of 330 patients underwent minimally invasive surgical treatment for endometrial cancer between 1999–2019. 254 (77%) patients underwent RHLND and 76 (23%) underwent LHLND. The mean age and BMI were similar. RHLND average operative time (123 minutes) vs LHLND (169 minutes) and RHLND EBL (50cc) vs LHLND EBL (198cc) was less. However, the average number of PLN (18) and PALN (9) in RHLND was found to be significantly less than LHLND PLN (24) and PALN (17). The rate of conversion was less for RHLND (0%) and LHLND (7/76) (9.2%) group. No difference in postoperative 17/254 (7%) RHLND vs 4/76 (5%) LHLND and intraoperative complication rate 5/254 (2%) for RHLND vs 2/76 (3%) LHLND respectively.

Conclusions Surgical outcomes for treatment of endometrial cancer in obese patients with RHLND compared to LHLND is associated with less blood loss, shorter operative time, less conversion to open laparotomy with no difference in rate of intraoperative and postoperative complication.

EP121/#79

CHARACTERIZING ISOLATED TUMOR CELLS IN REGIONAL LYMPH NODES OF EARLY ENDOMETRIAL CANCER

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Objectives To examine isolated tumor cell (ITCs) characteristics in regional lymph nodes of early-stage endometrial cancer.

Methods This is a retrospective cohort study examining the Surveillance, Epidemiology, and End Result Program. The study population was 6,472 women with non-metastatic, node-negative T1 endometrial cancer who underwent primary hysterectomy and surgical nodal evaluation. Multivariable binary logistic regression model was used to identify independent characteristics for ITCs. Postoperative therapy according to ITCs status was also assessed with propensity score weighting.

Results ITCs were seen in 111 (1.7%) cases. In a multivariable analysis, ITCs were largely associated with deep myometrial invasion (T1b versus T1a, 4.0% versus 1.0%, adjusted-odds ratio [aOR] 3.42, P<0.001) and large tumor size (>4 cm, 3.0% versus 1.6%, aOR 1.55, P=0.037). Moreover, women undergoing sentinel lymph node (SLN) biopsy had a higher likelihood of identifying ITCs compared to those undergoing lymphadenectomy (LND): 2.7% for SLN alone, 3.7% for SLN/LND, and 1.2% for LND alone (aOR ranged 2.9–3.7, P<0.001). In the low-risk group (stage IA, grade 1–2 endometrioid, 78.4% versus 9.2%, P<0.001), including EBT alone (5.3% versus 0.6%).
**Conclusions** This study suggests that a SLN protocol can identify more ITCs in the regional lymph nodes of early endometrial cancer which impacts postoperative therapy with variable treatment patterns. Deep myometrial invasion and large tumor size were associated with increased risk of ITCs.

**Objectives** The landscape of surgical nodal evaluation is shifting from lymphadenectomy to sentinel lymph node (SLN) biopsy for early endometrial cancer in the recent years. This study examined the association between SLN biopsy and micrometastasis in early endometrial cancer.

**Methods** This is a retrospective cohort study examining the National Cancer Institute’s Surveillance, Epidemiology, and End Result Program. The study population was 6,414 women with T1–2 endometrial cancer who underwent primary hysterectomy and surgical nodal evaluation. Exposure assignment was per surgical nodal evaluation (SLN biopsy or lymphadenectomy). Main outcome measure was micrometastasis, assessed by inverse probability of treatment weighting propensity score in a stage-specific fashion.

**Results** In T1a disease (n=4,608), SLN biopsy was performed in 1,164 (25.3%) cases. SLN biopsy was associated with a 90% increased likelihood of identifying micrometastasis compared to lymphadenectomy (1.3% versus 0.7%, odds ratio [OR] 1.90, 95% confidence interval [CI] 1.02–3.55, P=0.040). In T1b disease (n=1,369), 270 (19.7%) cases had SLN biopsy. The incidence of micrometastasis was significantly higher in the SLN biopsy group compared to the lymphadenectomy group (8.4% versus 5.0%, OR 1.74, 95%CI 1.06–2.86, P=0.028). In T2 disease (SLN biopsy 57 [13.0%] of 437 cases), the incidence of micrometastasis was similar between the two groups (7.9% versus 7.0%, OR 0.88, 95%CI 0.30–2.60, P=0.818).

**Conclusions** SLN biopsy protocol can identify more micrometastasis by 74–90% in the regional lymph nodes of T1 endometrial cancer. Recent increase in the utilization of SLN biopsy in early endometrial cancer may therefore result in stage-shift to advance disease in the future.

**Objectives** Evaluate the prognostic value of neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR), and monocyte-to-lymphocyte ratio (MLR) in patients with non-endometrioid endometrial cancer.

**Methods** Laboratory and clinicopathological data from 118 patients with non-endometrioid endometrial cancer who underwent surgical resection between January 2010 and December 2019 were reviewed. NLR, PLR and MLR were analyzed for correlations with recurrence and survival. The receiver operating characteristic (ROC) curves were generated for the NLR, PLR, and MLR. Optimal cut-off values were determined as the points at which the Youden index (sensitivity + specificity – 1) was maximal. Based on the results of the ROC curve analysis, the patients were grouped into high MLR and low MLR groups. Recurrence rate, disease-free survival, and overall survival were compared between the two groups. The prognostic factors were investigated using univariate and multivariate Cox proportional hazards model.

**Results** The optimal cut-off value of MLR was 0.191 (AUC, 0.718; p < 0.001). Significantly more patients in the high...