HIGH-INTERMEDIATE AND HIGH RISK ENDOMETRIAL CANCER IS ASSOCIATED WITH INCREASED RATES OF LYMPH NODE Invasion

Introduction/Background High-intermediate and high-risk endometrial cancer cases are associated with increased risk for lymph node invasion. Main objective of the present study was to report the overall rate of pelvic and paraaortic lymph node invasion in these cases.

Methodology A retrospective single-center study was observed regarding the period 2019–2022. In this study we included cases with high-intermediate and high-risk endometrial cancer cases in which full surgical staging with pelvic and para-aortic lymphadenectomy was performed, either open or laparoscopically. Epidemiological and histopathological characteristics of patients were recorded. Primary outcome was the rate of overall lymph node invasion as well as the rate of invasion in pelvic and para-aortic lymph nodes separately. Univariate regression analysis was also performed to identify histopathological parameters being significantly associated with risk for lymph node invasion.

Results There were overall 22 cases identified during the period. Mean age of patients were 65.9 years, while final stage was assessed to be stage ≥ IIIA in 71.4% of cases (n=15). Overall rate of lymph node invasion was 59.1% (n=13), while relative rates for pelvic and para-aortic lymph nodes were 59.1% (13/22) and 50.0% relatively (11/22). Rates did not differ significantly between sub-groups of high-intermediate and high risk patients, ranging between 46.2% and 61.5%. LVSI was assessed to be independent factor of lymph node invasion (P=0.03).

Conclusion High-intermediate and high risk endometrial cancer cases are associated with high rates of pelvic and para-aortic lymph node invasion. Surgical staging still remains the procedure of choice in this category of patients to identify lymph node metastasis and thereafter tailor adjuvant treatment.

THE PROGNOSIS OF PATIENTS WITH ENDOMETRIAL CANCER IS AFFECTED BY OBESITY?

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INTRODUCTION/BACKGROUND Endometrial carcinoma is divided, based on their histopathological characteristics, into Type I and Type II carcinoma. Type I tumors are mostly endometrioid carcinomas, represent up to ~80% of endometrial cancers, and are generally associated with endometrial hyperplasia. Type II tumors are more often serous papillary, clear cell, or squamous carcinomas, and generally develop from atrophic endometrial tissue in older women. There is some evidence that endocrine and nutritional lifestyle factors, including obesity, affect the risk of type I but not of type II tumors.

METHODOLOGY The data of 64 consecutive women with endometrial cancer stage FIGO III and IV that presented on our tumor board were retrospectively reviewed. Median age was 64 years, the youngest patient had 34 and the oldest 77 years. In FIGO stage III 56% of patients were diagnosed and 44% of patients in the FIGO stage IV. The majority of the patients in this study were found to have endometrioid histologic subtype (41/62, 66.1%). However, the non-endometrioid histologic subtypes were well presented in our population (serous papillary 12/62, 19.3%, and clear cell 9/62, 14.5%). Median BMI was 25, BMI underweight 11%, BMI normal 39%, BMI overweight 50%.

RESULTS The most overweight patient was in endometroid histology group, with median BMI of 27.16. The median BMI in non-endometroid histologic subtypes was around 22. In the endometroid histology group most of the patient were obese, 58.54%, underweight was 12% of patients and 29% of patient had normal BMI. In serous papillary subgroup 25% were obese and in clear cell group 35%.

CONCLUSION Patients with endometroid histology had a better prognosis, and were more likely to be overweight.
AN ALGORITHM BASED ON CD8 AND CD68/PD-1 EXPRESSION WITHIN THE TUMOUR IMMUNE MICROENVIRONMENT DETECTED BY MULTIPLEXED IMMUNOFLUORESCENCE CAN DISCRIMINATE FIGO IA AND IB ENDOMETRIAL ENDOMETRIAL CARCINOMAS

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Introduction/Background Most low-risk, early-stage disease endometrioid endometrial carcinomas (FIGO stage I EEC) have a good clinical outcome. 5–10% of these patients will suffer recurrence. The tumour immune microenvironment is closely associated with the tumour biology and has been shown to be a powerful prognostic tool in several tumour types.

Methodology A retrospective cohort of hysterectomy specimens (n=75) with FIGO stage I EEC from our institution were identified. 77.8% were stage IA and 22.2% stage IB. MELF (Microcystic, elongated, and fragmented) pattern of myoinvasion was detected in 21%. A TMA with 3 regions of interests (ROI) was constructed. Multiplexed immunofluorescence was used to assess staining for CD3, CD8, CD20, CD68, PD-1, PD-L1, FOXP3 and pan-cytokeratin on the Vectra Polaris™ platform and analyzed using QuPath software. Discriminant function analysis was performed to classify patients in ‘Stage IA vs. Stage IB’, according to invasion. All the analyses were performed with IBM SPSS version 20 and Openepi. We fit a logarithmic curve to predict invasion in mm based on CD8.

Results Statistical analyses (chi-square test) showed that CD20, CD68, Foxp3, Foxp3/PD1, CD68/PD1 and CK/PD1 were associated (p<0.05) with MELF but not with depth of invasion (mm). The discriminant model (Stage IA vs IB) obtained the following equation: Classification score = 1.081 + 0.002 (mean_CD8) – (0.005* mean_CD68_PDL1). Sensitivity and specificity for the score were: 68.42% (95% CI 52.54, 80.92) and 57.14% (95% CI 32.59–78.62) . Positive Predictive Value was 81.25%. We fitted a logarithmic curve for the prediction of invasion the model was the following mm invasion = 13.725 – 1.446 ln(mean_CD8)) (figure).

Conclusion An algorithm based on combined CD8 and CD68/PD1 expression can discriminate the likelihood of Stage IA or stage IB tumours from a small tissue sample. In addition, mean of CD8 expression was associated with mm of invasion [AG1] (curve, figure).