CIRCULATING HPV CELL-FREE DNA IN CERVICAL CANCER

Introduction/Background Human papillomavirus (HPV) related cervical cancer is the fourth most frequent cancer in women worldwide. Currently patient follow-up and therapy monitoring is solely based on clinical examination and cross-sectional imaging. Liquid biopsies for cell-free circulating tumor DNA in cancer are a novel biomarker to detect treatment response, residual disease, and relapse. The aim of this study was to investigate the potential use of cell-free circulating HPV-DNA in plasma samples of patients with cervical cancer.

Methodology In this proof-of-concept study cfHPV-DNA levels were measured using a highly sensitive Next-Generation-Sequencing-based approach targeting a panel of 13 high-risk HPV-types. For nine patients cfHPV-DNA sequencing was compared to HPV testing in corresponding paraffin embedded tumor sample. Sequencial plasma samples were taken from four patients receiving primary chemoradiation.

Results A total of 70 blood samples was collected from n=35 patients. cfHPV-DNA was successfully detected in 25/35 (71%) patients; of them, 8 patients had some surgical pretreatment when the sample was collected. A significant correlation between tumor burden and cfHPV-DNA detection was observed: while cfHPV-DNA was detectable in most patients (20/22) with locally advanced or metastatic disease (FIGO IB3 – IVB), detection was successful in only 5/13 patients with early-stage disease (FIGO IA – IB2). p<0.005. When pretreated patients were excluded, the detectable rate was 100% (18/18) for advanced stages and 55% (5/9) for early stages.

Conclusion In this proof-of-concept study we were able to detect cfHPV-DNA in plasma samples of patients with primary and recurrent cervical cancer. Our findings may hold potential to develop a powerful and easily accessible tool in cervical cancer management.

RETROPERITONEAL PARAORTIC LYMPH NODE STAGING IN ADVANCED CERVICAL CANCER: TUNISIAN EXPERIENCE

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Introduction/Background Locally advanced cervical cancer is treated with Radio-chemotherapy and brachytherapy. Therefore; a pre-treatment para-aortic lymph node assessment is important for disease staging and therapeutic implications. Our study aimed to analyze the Tunisian experience of laparoscopic lymphadenectomy for patients with locally advanced cervical cancer.

Methodology We reported 29 patients with locally advanced cervical cancer who underwent laparoscopic lymphadenectomy at our Institute between 2016 and 2022.

Results The mean age was 44 years. Patients were staged IIIC1 in 48.2%, 2,5% were IIB, 6.9% were IVA, 6.9% IB1, 6.9% IB3 and 2.8% were IIA2. CT scan and MRI showed suspicious pelvic lymph nodes in 65.5% and suspicious para-aortic lymph nodes in 17.9% of cases. All patients underwent para-aortic lymph node dissection after a mean time of 6 days. Our technique was 68.9% Transperitoneal and 31.01% extraperitoneal. The mean time duration was 2:37Hours. There was no per-operative or postoperative complications. One patient had a blood transfusion The mean time of hospital stay was 2 days. Pathological examination found a mean number of 9Nodes (range 2–22 removed lymph nodes).

Conclusion Pre-treatment laparoscopic staging surgery plays an important role in the treatment and the decision of the radiation field. Although imaging modalities are improving, the current gold standard for determining lymph node status is surgical sampling mainly in developing countries with difficult access to PET-CT.

IS LAPAROSCOPIC RADICAL HISTERECTOMY SAFE IN CERVICAL CANCER WITH TUMOR SIZE ≤2 CM, EVEN IF PARAMETRIAL INVASION OR LYMPH NODE METASTASIS IS FOUND AFTER SURGERY?

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Conclusion In this study, we retrospectively reviewed the outcomes of 202 cases treated with radical hysterectomy at our institution. The overall complication rate was 16.8% (n=34), with 12.8% (n=26) minor complications and 4.0% (n=8) major complications. Among these, there were no postoperative deaths, severe hemorrhage, or major visceral injuries. The 5-year overall survival rate was 76.7% and the disease-free survival rate was 65.4%. These results suggest that laparoscopic radical hysterectomy is safe and effective for the treatment of cervical cancer with tumor size ≤2 cm, even if there is parametrial invasion or lymph node metastasis.
Introduction/Background  Previously, our research team suggested patients with 2009 FIGO stage IB1 cervical cancer with tumor size ≤2 cm on preoperative magnetic resonance imaging (MRI) were safe candidates as laparoscopic radical hysterectomy (RH) did not influence disease recurrence in this subgroup. We aimed to investigate whether laparoscopic RH is also feasible in parametrial-positive or node-positive, early cervical cancer with a small sized tumor.

Methodology  From Cervical Cancer cohorts of three tertiary institutional hospitals, we identified patients with 2009 FIGO stage IB1 who received either open or laparoscopic RH. Among them, those with cervical tumor ≤2 cm on pre-operative MRI and were adherent to the guidelines for adjuvant treatment were included. Patients’ clinicopathologic characteristics and survival outcomes were compared between the laparoscopic and open RH groups. Subgroup analyses were conducted according to the presence or absence of parametrial invasion (PMI) and lymph node metastasis (LNM).

Results  In total, 498 patients were included: 299 and 199 for laparoscopic and open RH groups, respectively. After surgery, all study population was managed properly in terms of adjuvant treatment. After a median observation period of 59.4 months, the two groups showed similar progression-free survival (PFS; P=0.615) and overall survival (P=0.439). On pathologic examination, 16 (3.2%) and 49 (9.8%) had PMI and LNM, respectively, and 10 (2.0%) had both. In a subgroup of PMI, no difference in PFS was observed between the laparoscopic and open RH groups (P=0.893). In a subgroup of LNM, the two groups also showed similar PFS (P=0.169). Consistent results were also found in subgroups of non-PMI and non-LNM.

Conclusion  Our study results demonstrate that laparoscopic RH might be safe in early cervical cancer with tumor size ≤2 cm, regardless of parametrial and nodal status, when adjuvant treatment is administered properly. Further large cohort studies are warranted to support our findings.