学位論文の要約

三 重 大 学

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主論文の題名

Laparoscopic retroperitoneal para-aortic lymph node biopsy in advanced cervical cancer with pelvic lymph node metastases: A single-center prospective study

(骨盤リンパ節転移を有する局所進行子宮頸癌に対する腹腔鏡下傍大動脈リンパ節生検術: 単施設による前方視的研究)

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Background

In cervical cancer, metastasis to the para-aortic lymph nodes (PANs) is associated with worse overall prognosis. Until 2014, the clinical staging of PAN metastases in cervical cancer involved stages up to IVB. In 2018, this was revised by the International Federation of Gynaecology and Obstetrics (FIGO) Committee to includes stage IIIC2, defined as PAN metastasis without other distant metastases. Extended-field concurrent chemoradiation therapy (Ex-CCRT) has been widely used for PAN metastases confirmed by radiographic assessment without surgical exploration.

Objectives

The objective of this prospective study was to evaluate the clinical value of laparoscopic retroperitoneal PAN biopsy in locally advanced cervical cancer (LACC) with pelvic lymph node (PLN) metastases.

Methods

This prospective study was registered with the University Hospital Information Network (UMIN) Clinical Trials Registry (registration number: UMIN000027458). From May 2017 to March 2020, stage IIB-IIIB cervical cancer patients who were diagnosed with PLN metastasis using positron emission tomography-computed tomography (PET-CT) with maximum standardized uptake value (SUV max) \geq 2.0 underwent laparoscopic retroperitoneal PAN biopsy. The radiation fields were extended to PAN areas with pathological metastases.

Results

Fourteen patients were diagnosed with cervical squamous cell carcinoma of FIGO stage IIB (n=7) and IIIB (n=7). The median tumour size was 56mm (range, 36-67mm). The median operating time was 138 min (range, 104-184 min). The median number of harvested PANs was 19 (range, 6-36). Three patients were positive for PAN metastasis on histological analysis. In this study, the sensitivity and specificity of PET-CT were 66.7% and 90.9%, respectively. The median time between surgery and CCRT administration was 13days (range, 11-17 days). No intraoperative complications occurred in all cases. Three patients developed lymphcysts postoperatively which required CT-guided drainage for radiation field planning: one of them was symptomatic.

Consideration

Radiographic and surgical diagnosis of lymph node metastases have produced conflicting results. A meta-analysis showed that the sensitivities of magnetic resonance imaging (MRI), CT and PET was 55.4%, 57.5% and 73%, respectively. The Gynaecologic Oncology Group (GOG) trials have shown better prognosis in patients who underwent surgical exclusion of PAN involvement compared to those who underwent radiographic determination. In Japan, most cases of PAN metastases are diagnosed using CT or PET-CT. Our study is characterized by the use of more appropriate eligibility criteria for LACC with PLN metastases.

Conclusion

Our results revealed that laparoscopic retroperitoneal PAN biopsy may be a useful approach to determine the radiation field for PANs during standard radiotherapy planning.