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Title:

Sentinel lymph node mapping in early stage of endometrial and cervical cancers

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Abstract

Background: The sentinel lymph node (SLN) is defined as the first chain node in the lymphatic basin that receives primary lymphatic flow. If the SLN is negative for metastatic disease, then other nodes are expected to be disease-free. Sentinel lymph node techniques have been extensively applied in the staging and treatment of many tumors including melanoma, breast and vulvar cancers. This study aims to evaluate our technique in SLN mapping in early stage endometrial and cervical cancers.

Method: We scheduled a semi experimental (interventional) study for patients undergoing staging surgery for endometrial and cervical cancer from November 2012 to February 2014 in Beheshti and Sadoughi hospitals. Our SLN mapping technique included one hour preoperative or intraoperative injection of 4 ml of 1% methylene blue dye in the tumor site. At the time of surgery, blue lymph nodes were removed and labeled as SLNs. Then systematic lymph node dissection was completed and all of the nodes were sent for pathologic examination concerning metastatic involvement. All of the sentinel nodes were first stained with hematoxylin and eosin (H&E) and examined. Those negative in this study were then stained with immunohistochemistry (IHC) using anti-keratin antibody. Descriptive statistics, sensitivity, negative predictive values (NPV), false negative (FN) and detection rates were calculated.

Results: Twenty-three patients including 62% endometrial and 38% cervical cancers enrolled in the study. Median of SLN count in the

endometrial and cervical cancers was 3 and 2, respectively. Among endometrial and cervical cancers detection rate of metastatic disease was 80% and 87.5%, respectively. The FN rate for this technique was 0 and the sensitivity and NPV are 100% for both endometrial and cervical cancers.
Conclusions: Considering the lower risk of metastases in early stage of both endometrial and cervical cancers, SLN technique allows for confident and accurate staging of cancer.

Keywords: endometrial cancer; cervical cancer; sentinel node; lymph node; metastasis

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