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SENTINEL LYMPH-NODE BIOPSY AND 18F-FDG PET/CT ACCURACY IN WOMEN WITH ADVANCED SQUAMOUS CARCINOMA OF THE VULVA: PRELIMINARY DATA OF PROSPECTIVE STUDY

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BACKGROUND-AIM

Vulvar carcinoma is a rare disease (0.5% of all malignancies). The standard treatment is radical excision and uni- or bilateral inguino-femoral lymphadenectomy. However, only 20% of patients have lymph-node metastasis. The aim of our prospective study was both to assess the accuracy of sentinel lymph-node (SLN) biopsy as a replacement for inguino-femoral lymphadenectomy in women with advanced squamous carcinoma of the vulva (SVC), and to determine the role of 18F-FDG PET/CT in lymph-node staging.

METHODS

The inclusion criteria used were: ECOG-PS ≤ 2 , normal cardio-respiratory, hepatic and renal function, SVC with stromal infiltration >1 mm or diameter >4 cm or bilateral or multicentric, previous partial or complete excisional biopsy, no suggestion for metastasis (cN0) after preoperative clinical and instrumental evaluation of inguino-femoral lymph-nodes. Exclusion criteria were previous radiotherapy and/or chemotherapy for vulvar and/or inguinal benign or malignant lesions, except neo-adjuvant treatments of SVC. All enrolled patients were submitted to computed tomography, ultrasound of inguino-femoral lymph-nodes, ultrasound-guided biopsy in case of suspected lymph-node metastasis, 18F-FDG PET/CT and SLN biopsy before surgery.

From July 2013 to October 2014, nineteen patients (mean age 69.6 yrs.) were enrolled in the study. Nine patients were stage IB, nine IIIA-B and one IVB, respectively. The median diameter of tumor was 2.6 cm. (range 1-7.5 cm). All patients underwent a wide excision of tumor (seven partial and twelve radical vulvectomy) and uni- (five pts.) or bilateral (fourteen pts.) groin dissection. SPECT/CT lymphoscintigraphy was performed in nine patients in order to obtain a better SLN localization.

RESULTS

The total preoperative lymphoscintigraphic detection rate was 94.7% (18/19 pts.). SLNs were unilateral in five patients and bilateral in thirteen patients. 73 SLN were analysed (30 in right and 43 in left groin): four SLNs were positive for metastasis in three patients. Furthermore, 180 non sentinel lymph-nodes were surgically removed (86 in right and 94 in left groin): three inguino-femoral lymph-nodes were positive in two patients, of whom one had positive and one had negative SLN. The patient with false negative SLN had unilateral vulvar lesion and the metastatic inguino-femoral lymph node, suspected after PET/CT, was located in the contralateral groin. SLN biopsy had an overall sensitivity of 75% (CI 95% 30-95) and NPV of 94.4%. PET/CT was true positive in three patients (mean SUVmax 5.1), false positive in three patients, false negative in one patient, and true negative in twelve patients. The overall per-patient sensitivity was 75% (CI95% 30-95.4) and specificity 80% (CI95% 54.8-92.9), respectively.

CONCLUSION

Our preliminary data on a small number of patients suggest that SLN biopsy, associated with PET/CT, could be a reasonable alternative to inguinal lymphadenectomy in women with advanced SVC, so may decrease the morbidity related to this procedure.