The usefulness of photodynamic eye for sentinel lymph node identification in patients with cervical cancer

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ABSTRACT

Aims and background. We studied the potential use of sentinel lymph node identification using a near-infrared fluorescence imaging technique in the treatment of cervical cancer.

Methods and study design. Directly before the start of the operation, 0.2 ml of 5 mg/ml indocyanine green was prepared and injected into 4 sites in the cervix using a 26-gauge standard needle, at 3, 6, 9 and 12 o’clock positions. When the operation was advanced to the pelvis, near-infrared fluorescence imaging was performed using photodynamic eye (Hamamatsu Photonics Co., Japan). The sentinel lymph nodes and other dissected lymph nodes were histologically examined to find any metastases.

Results. Twelve patients were examined. Their ages ranged from 36 to 68 years (median, 58). Sentinel lymph nodes were identified in 10 patients (83%), and all were bilaterally identified. The median maximum tumor diameter of dissected cervical tumors was 35 mm (22-65); histology was squamous cell carcinoma in 8 patients and adenocarcinoma in 2 patients. Capillary lymphatic space involvement was found in 8 of the 10 patients. The site of the sentinel lymph node was the right external iliac node in 8 patients, the right obturator node in 8, the left external iliac node in 9, and the left obturator node in 8. Lymph node metastasis was found in 2 of the 12 patients, and all were sentinel lymph nodes. No metastasis from lymph nodes other than sentinel lymph nodes was observed.

Conclusions. Photodynamic eye achieved a detection rate similar to that obtained with the blue dye and radioisotope method. It is also easier to use than the other two methods. Free full text available at www.tumorionline.it