Sentinel lymph node detection in patients with cervical cancer in a public hospital in Guatemala

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Sentinel lymph node biopsy has been widely studied in a number of cancers.[1] In cervical cancer, this technique has been shown to be safe and feasible. There is still some debate on the role of sentinel lymph node biopsy in cervical cancer; however, most studies have shown that such a procedure offers significant advantages over complete lymphadenectomy. [2] Blue dye is used as a valid alternative in many centers, due to the lower cost. We conducted a study to evaluate the feasibility of sentinel lymph node detection in patients with cervical cancer using the low-cost methylene blue dye.

Patients with 2009 International Federationof Gynecology and Obstetrics (FIGO) stage IA2 to IB2 cervical cancer who underwent abdominal radical hysterectomy and pelvic lymphadenectomy were enrolled. Methylene blue was injected, 1 mL in depth and 1 mL on the surface of the cervix at 3 o'clock and 9 o'clock.(figure 1) The result of the sentinel lymph node biopsy was obtained using ultrastaging; cytokeratin immunohistochemical staining was performed.

Figure 1 Required equipment and materials for sentinel lymph node detection. Photograph reproduced with permission of Dr Julio Lau.

Figure 2 Example of sentinel lymph node detection and location. Photograph reproduced with permission of Dr Julio Lau.

We enrolled 61 patients during a 60-month period and sentinel lymph node mapping was performed. All patients underwent a complete lymphadenectomy. The median patient age was 45 years (range 29–77). The median body mass index was 22.42 kg/m^2 (range 18–29). The bilateral detection rate was 85.2% and the unilateral sentinel lymph node detection rate was 89% (95% CI 82.3 to 91.6). The specificity was 100% and sensitivity and negative predictive value were 90% and 97%, respectively. Sentinel lymph nodes were identified in the obturator, external iliac, and internal iliac areas in 50%, 31.7%, and 18.3% of cases, respectively.(figure 2) No sentinel lymph nodes were found in the common iliac region. The mean number of sentinel lymph nodes per patient was 2.34, and 14% were positive for metastasis.

Blue dye cervical injection is a "low-cost", safe, and feasible procedure to detect sentinel lymph nodes in carcinoma of the cervix. Other tracers, such as indocyanine green, are widely used in gynecological oncology, but with a higher cost and the need for a dedicated optical filter. In our low resource setting, we consider that sentinel lymph node mapping is feasible with the use of blue dye.

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