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Sentinel lymph node detection in patients with cervical cancer, a feasible procedure for a public hospital in Guatemala

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Abstract

Background

Sentinel lymph node biopsy has been widely studied in a number of cancer types. As far as cervical cancer is concerned, this technique has already been used, revealing positive results. The debate on the role of sentinel lymph node biopsy in cervical cancer is still open although most of the studies have already revealed its superiority over complete lymphadenectomy. Blue dye is used as a valid alternative in many centers, due to the lower cost of execution.

Objective

To evaluate the feasibility of sentinel lymph node (SLN) detection in patients with cervical cancer using the low-cost methylene blue dye and to optimize the application procedure.

Patients and Methods

Patients with 2009 FIGO stage IA2 to Ib2 cervical cancer and subjected to 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. We enrolled 61 cases from 2013 to 2018 and surgically removed lymph nodes were examined for the blue lymph nodes that were considered as SLNs. After 20 min, it was shown with precision the lymphatic drainage until the first lymph node station from both sides. A pooled detection rate of 85.2% (95% CI 82.3% to 91.6%). The positive predictive value and specificity were both 100% and sensitivity and negative predictive value were 90% and 97%, respectively. SLNs were identified in obturator and external iliac areas in 50% and 31.7%, respectively; no SLNs were discovered in the common iliac region.

Conclusions

Blue dye cervical injection is a “low-cost”, safe, and a feasible procedure to detect Sentinel Lymph Node in carcinoma of the cervix. Other tracers, such as indocyanine

green, are widely used in gynecological oncology, but with a higher cost of the product and the needing of a dedicated optical filter to be shown on human view.

Reference

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