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Retroperitoneal Lymph Node Mapping with Patent Blue Dye Injection: Is the Testicular Route Feasible?

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Dear Editor,

The management of regional lymph nodes in patients with clinical Stage I testicular carcinoma is a controversial problem due to high rates of micrometastasis in the retroperitoneal area. Open or preferably laparoscopic lymph node resections can be done for precise pathologic lymph node staging of metastatic disease with several difficulties for the surgeon and morbidities for the patient. Sentinel node biopsy and mapping is now widely used for breast cancer and melanoma staging, and its possible value in several other malignancies became the topic for worldwide ongoing researches. In recent years, there has also been an effort to develop an easy, safe and accurate technique using patent blue dye and/or radio-guided lymphoscintigraphy techniques for retroperitoneal lymph node mapping for testicular cancer [1-4]. These circumstances prompt us to evaluate the value of Patent Blue Violet (PBV) in retroperitoneal lymph node mapping and review its effectiveness and feasibility via a testicular route.

PBV has been used as a dye for mapping lymph nodes in gastrointestinal tumors, malignant melanoma, thyroid cancers and is currently recommended for sentinel lymph node biopsy in patients with breast cancer [5]. PBV has also been previously studied in order to identify the retroperitoneal lymphatic structure in normal animals and even in humans with malignant diseases [6]. The method is easy to perform and does not need any experience. Basal et al. first demonstrated that both spermatic funicular and intratesticular injection of patent blue dye are feasible and accurate methods for retroperitoneal lymph node mapping in rats [4]. After that, Irkilata et al. combined this technique with laparoscopic lymphadenectomy and demonstrated that spermatic funicular injection of PBV dye is a feasible and accurate method for retroperitoneal lymph node visualization in pigs [2]. This approach can be valuable in the management of testicular cancer by serving as a guide for the surgeon when retroperitoneal lymph node dissection is indicated, because preop-

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erative staining of lymph nodes with blue dye might improve the radicality and selectivity of lymphadenectomy.

Initial studies showed us that PBV is a feasible and effective method for visualizing retroperitoneal lymph nodes via a testicular route. Despite not being human studies, it can be said that combining the technique with several operative approaches can make the surgical procedure easier. In the near future, with human studies this procedure may be a sufficient diagnostic option for retroperitoneal occult diseases and an assistive approach for surgical procedures.

Conflict of interest statement

The authors do not declare any conflict of interest or financial support in this study.

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