La biopsie des ganglions sentinelles dans le cadre du traitement du cancer du sein: aspects techniques [Sentinel lymph node biopsy in breast cancer management: technical aspects]

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Citation

Authors’ conclusions
Sentinel node biopsy is a proven technique in terms of feasibility and diagnostic accuracy. In experienced hands, it generally yields high identification rates and has a low risk of false negatives (1 - negative predictive value). Certain technical aspects nevertheless influence these performance measures. For maximum success rates, the following technical protocols are suggested:

- The use of radioisotope alone is better than the use of blue dye alone. Combining the two tracers achieves the best identification rates and the lowest risk of false-negative findings. The difference between the combined technique and the isotope technique alone is not statistically or clinically significant, so the potential risk of allergic reaction must be considered in selecting the technique to adopt.

- The different types of dyes and radioactive colloids do not substantially modify the results of sentinel node biopsy. Superficial injection of the tracer (periareolar, subareolar, supratumoural administered intradermally or subcutaneously) offers better success rates in identifying sentinel nodes than intraparenchymal injection. However, the injection site does not affect the risk of false negatives.

- The time from radioisotope injection to surgery is not meaningful if the dose is increased for injection administered the day before the procedure. However, the risk of false negatives may be slightly higher for injection given the day before surgery.

- Preoperative lymphoscintigraphy appears not to improve either sentinel node identification rates or the sensitivity of sentinel node biopsy for detecting axillary lymphatic invasion.

- Immunohistochemistry combined with standard histological examination (hematoxylin-eosin staining) achieves highly variable results and does not seem to reduce the risk of false negatives in sentinel node biopsy. Its use is optional at this time. The prognostic value of micrometastases detected solely through immunohistochemistry is currently under investigation.

- Despite low sensitivity for detecting micrometastases, intraoperative examination of sentinel nodes by imprint cytology or frozen section offers the possibility of immediate axillary dissection in the event of positive intraoperative findings. Surgeon experience affects sentinel node identification rates but has a lesser impact on the risk of false negatives. The learning curve seems short: high performance levels may be achieved with as few as 20 biopsies under the supervision of a qualified surgeon. Sentinel node identification rate could subsequently serve as a performance indicator.

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