Photogravure

Intraoperative Lymphatic Mapping by Dye and/or Radioactive Tracer in Early Gastric Cancer

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![Fig. 1](image1)

![Fig. 2](image2)

The intraoperative lymphatic mapping by dye and/or radioactive tracer identifies the sentinel lymph node (SLN), which is the first lymph node that receives drainage from the primary tumor. The concept of SLN has been proved and applied clinically in the treatment of melanoma and breast cancer, and has been also extended to the surgery of early gastric cancer. The SLN mapping represents a major advance in the staging of the disease and predicting the nodal status not only in melanoma and breast cancer but also in gastric cancer. Selective lymphadenectomy would be adopted in the surgery of early gastric cancer if the concept of SLN is evident. Micrometastasis in the SLN is examined microscopically by a hematoxylin and eosin stained section and an immunohistochemical staining of cytokeratin.

This photogravure shows the technique of intraoperative lymphatic mapping by dye and/or radioactive tracer in early gastric cancer.
Fig. 1  The technique of lymphatic mapping and SLN by dye and/or radioactive tracer.*

Fig. 2  Endoscopic injection of dye is performed intraoperatively.

Two ml of Indigocarmine or indocianin green is injected around the tumor (IIc type of early gastric cancer) submucosally by using 23 gage puncture needle.

a) injection  b) after injection

Fig. 3  Afferent lymphatic vessels and SLNs along the greater curvature of the stomach are seen 10 minutes after the dye injection. An arrow (↑) shows SLN and triangles (▲) show lymphatic vessel.

Fig. 4  Detection of SLNs with radioactivity is performed by gamma navigation system intraoperatively.*

Fig. 5  Immunohistochemical demonstration of micrometastasis in SLN by staining with anticytokeratin antibody. Positive staining is seen in cancer cells.

References

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