



Endoscopic ultrasound guided fine needle marking of lymph nodes

Michael H. Larsen, Claus Fristrup, Torsten Pless, Alan Ainsworth, Henning O. Nielsen, Claus P. Hovendal, Michael B. Mortensen.
Department of Surgery, Odense University Hospital, Denmark

Introduction:

No previous studies have evaluated the ability of endoscopic ultrasound (EUS) to describe the anatomic location of lymph nodes based on a direct node-to-node comparison. The aim of this study was to assess the feasibility and safety of a new EUS guided fine-needle marking (EUS-FNM) technique of lymph nodes.

Patients and methods:

Twenty-five patients with suspected or confirmed upper gastrointestinal tract malignancies were prospectively included. Patients unsuitable for surgery or patients without lymph nodes suitable for marking were excluded (n=6). EUS-FNM was performed with a silver tack with a diameter allowing it to fit into a 19-gauge needle. The position of the tack was verified by EUS (figure 1). Endpoints were the ability to identify and isolate the marked lymph node during surgery together with complications and a comparison between the location of the silver tack suggested by EUS and the actual location found in the resected specimen.

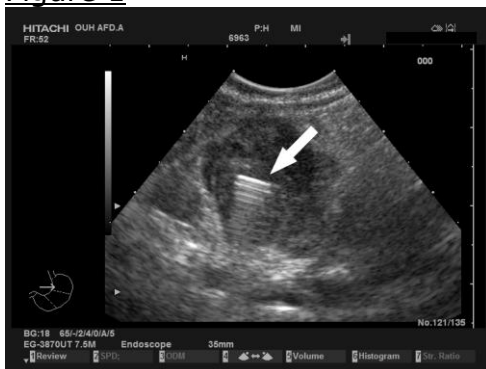
Results:

Nineteen lymph nodes in 19 patients were marked. The lymph node was isolated in the resection specimen in 18 (95%) patients. In 84% of the cases the marked lymph node was in the same location as described by EUS. One tack was not isolated in the specimen. In 2 out of 18 cases the tack was not localized by laparoscopic ultrasound. In 3 cases, a small hematoma was observed. None of the complications had any impact on the further treatment.

Conclusion:

EUS-FNM with a silver tack in lymph nodes is feasible and safe. EUS-FNM seems to be a tool for evaluating lymph nodes based on a direct node-to-node comparison.

Figure 1



A hypoechoic lymph node marked with a tack. The hyperechoic tack is marked with an arrow