

Background and aim

The performance of EUS-FNA for enlarged lymph nodes can be suboptimal and some alternative procedures have been proposed to increase its diagnostic yield. Rapid on-site evaluation (ROSE) showed some advantages in terms of adequacy and number of needle passes but its additional costs limit its availability. Macroscopic on-site evaluation (MOSE) of the specimens could be a cheaper alternative but a strong evidence of its utility still lacks in literature. The use of histological needles is a third option to get more tissue with less needle passes; moreover, an additional advantage of FNB is the better characterization of lymphomas through an histological core rather than a cytological specimen. The aim of the study was to assess the adequacy of FNB coupled with MOSE with up to 2 or more than 2 needle passes for enlarged lymph nodes.

Material and methods

This is a retrospective study in which MOSE-guided FNB procedures in the period 2013-2020 for mediastinal or abdominal lymph nodes >1 cm were analyzed. Under conscious sedation the target lymph nodes underwent one or more needle passes using one of the following needles: Cook Procore 22G, Cook Procore 20G, Boston Scientific Acquire 22G. The needle was emptied in a formalin bottle after each needle pass and the procedure was interrupted when MOSE showed an overall length of the tissue cores exceeding 2 cm, regardless of the number of the needle passes. We calculated the adequacy when up to 2 or more than 2 needle passes were effected.

Results

Overall, 72 patients entered the study; 36 had mediastinal lymph nodes and 36 abdominal lymph nodes; the needle used were Cook Procore 22G (21), Cook Procore 20G (40), Boston Scientific Acquire 22G (11). FNB was adequate in 45 out of 51 cases (88.2%) after ≤ 2 needle passes and in 19 out of 21 cases (90.5%) after >2 needle passes ($p=1$). The three needles showed a similar performance. Diagnoses were carcinoma (21), lymphoma (21), sarcoidosis (9), tuberculosis (2), benign lymph nodes (11), non diagnostic (8). No adverse events occurred.

Conclusions

EUS-guided tissue acquisition of enlarged lymph nodes can be adequate in about 90% of cases when MOSE is applied to FNB aspirates; this strategy seems advisable when ROSE is unavailable; doing more than 2 needle passes does not increase the performance of the procedure.