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Core Mediastinal Lymph Node Biopsy with Transbronchial Forceps – 14 Case Serie In A Single Center

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Purpose

•Endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) is a well-established technique for sampling mediastinal or hilar lymph nodes with highly diagnostic yields in lung cancer.

•However, EBUS-TBNA fails to provide robust histopathological evaluation of the lymph node architecture, cellular composition and growth pattern in lymphoma or sarcoidosis cases.

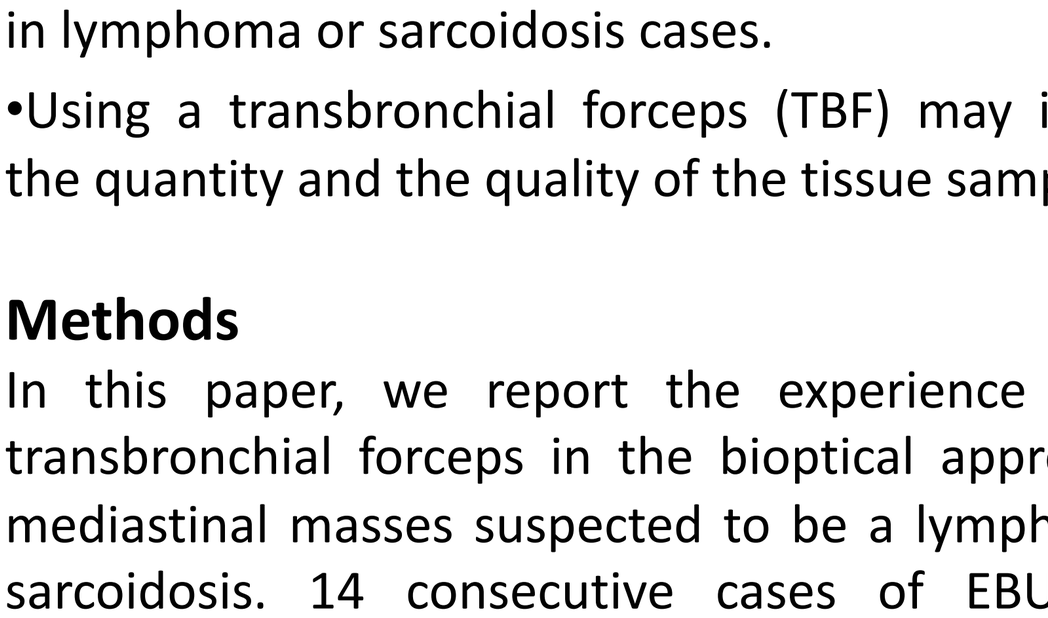
•Using a transbronchial forceps (TBF) may increase the quantity and the quality of the tissue sample.

Methods

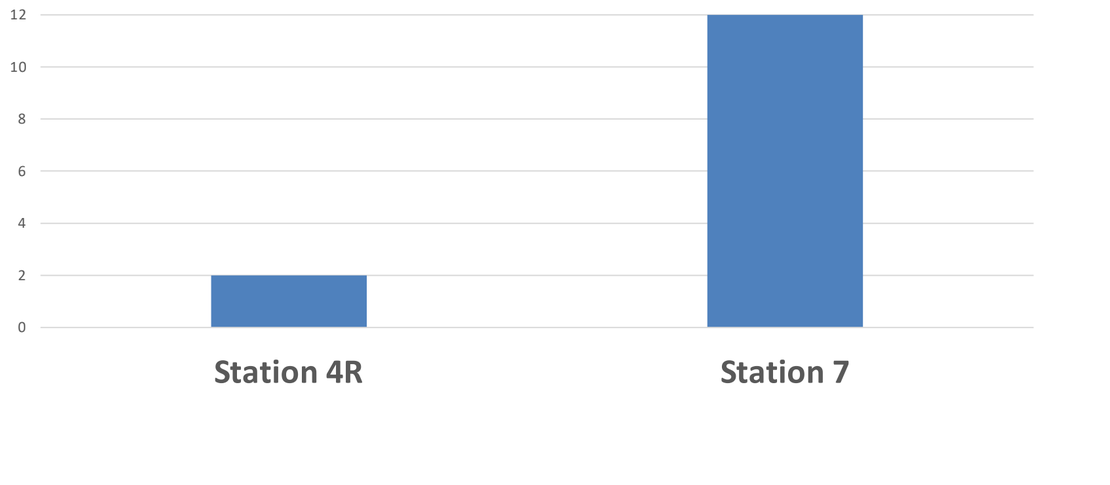
In this paper, we report the experience with a transbronchial forceps in the bioptical approach to mediastinal masses suspected to be a lymphoma or sarcoidosis. 14 consecutive cases of EBUS-TBNA associated with EBUS-TBF in the same lymph nodes were analyzed.

Results

- Performed under GA in 10/14 cases



- Failure rate - 21.4% (3 patients)
- TBF - better tissue samples for histological diagnosis (in terms of cellular density, presence of tissue micro fragments, degree of contamination) in 10/11 patients (90.9%)
- TBF - diagnosis in 7/10 patients (70%)



- No significant procedure-related complications

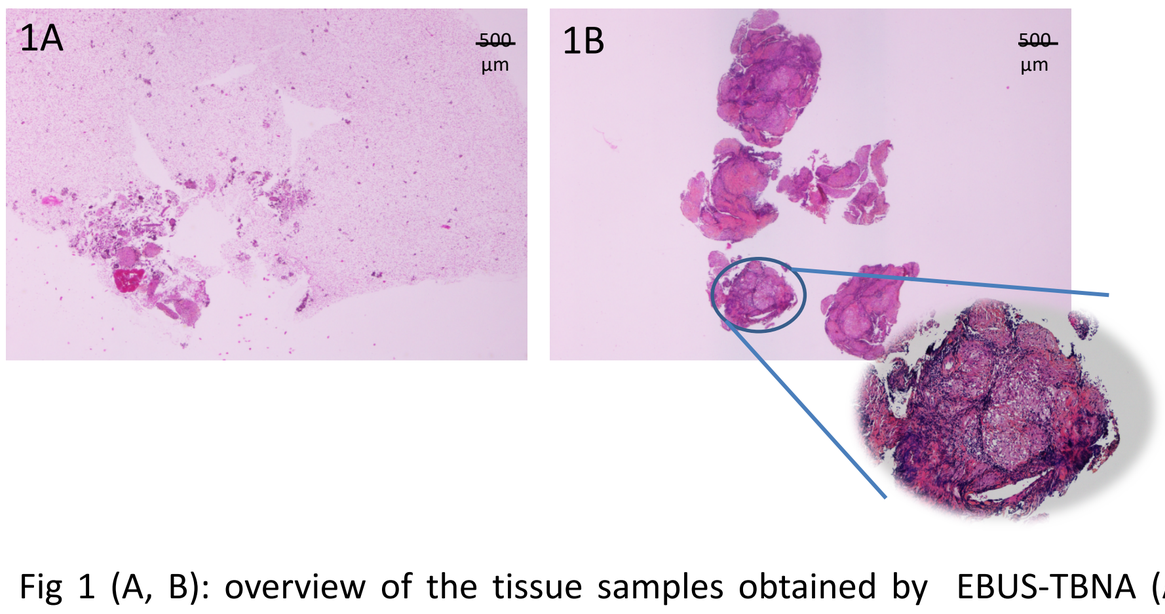


Fig 1 (A, B): overview of the tissue samples obtained by EBUS-TBNA (A) and TBF biopsy (B) of a subcarinal node in a patient with granulomatous disease clinical suspicion. The size of the sample is submillimetric in EBUS-TBNA (even if sufficient to assess diagnosis), while in fig. B the samples appear more substantial facilitating the morphologic examination.

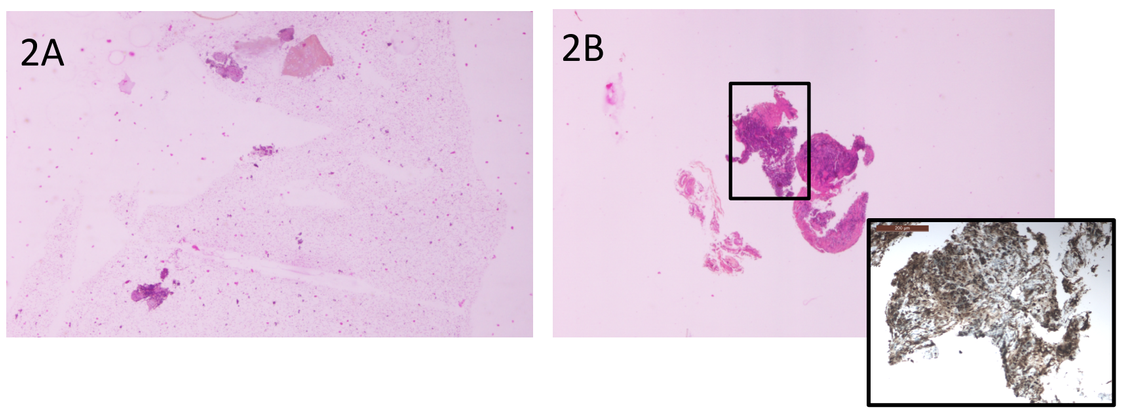


Fig. 2 (A,B): overview of samples collected from subcarinal node. Histopathologic interpretation of sample collected by EBUS-TBNA appears difficult as the lymphoid tissue is not sufficiently dense. TBF biopsy (B) provides millimetric fragments of the tissue, giving an overview of the lymphoid tissue distribution. A phenotypical characterization of the lymphoid population was possible, raising the diagnosis of lymphoma, which has been confirmed successively in a surgical biopsy.

Conclusions

- In our experience, TBF safely provides diagnostic histologic specimens of mediastinal lymph nodes, with better tissue sample quality than TBNA.
- In selected cases of mediastinal diseases such as lymphoma and sarcoidosis, transbronchial forceps core biopsy could be considered a safe and valid diagnostic technique and maybe an alternative one to more invasive surgical approach.
- Prospective studies are needed.

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