

EBUS-GS-TBLC increase the diagnosis rate in different type of peripheral pulmonary lesions

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Background and objective: Recently, endobronchial ultrasonography with guide sheath-guided (EBUS-GS) has been increasingly used in the diagnosis of peripheral pulmonary lesions (PPLs) from human natural orifice. However, the diagnostic rate is still largely dependent on the location of the lesion and the probe. Here, we reported a new procedure to improve the diagnostic rate of EBUS-GS-transbronchial lung biopsy/cryobiopsy (TBLB/TBLC). In addition, we performed TBLC under general anesthesia with laryngeal mask airway (LMA) in all of the patients who were treated with this method.

Methods: Retrospective review of 156 cases of EBUS-GS-TBLB/TBLC for PPLs over 11 months.

Results: The study evaluate the diagnosis of PPLs with blind-ending type and pass-through type procedures (Type I and Type II) of EBUS-GS-TBLB/TBLC. A total of 156 cases EBUS-GS-TBLB/TBLC were performed during the study period. Among them, 61 (39.1%) were performed Type I and 95 (60.9%) were performed Type II. Clinical baseline characteristics did not differ between two groups. The overall diagnosis rate of 156 patients with EBUS-GS-TBLB/TBLC was 81.4% (127/156), and different method type have significant influence on the diagnostic yield ($P = 0.016$, $\chi^2 = 5.699$). Among them, diagnostic yields for Type I with eccentric (n=40), Type I with concentric (n=21), Type II with eccentric (n=48), and Type II with concentric (n=47) were 65.0%, 85.7%, 87.5% and 87.2%, respectively ($P < 0.05$). The incidence of complications in 156 patients was 2.6%.

Conclusion: EBUS-GS-TBLB/TBLC is a safe and highly diagnostic technique, different method types have significant influence on the diagnostic yield. Moreover, type II procedure has higher diagnostic yield. In addition, Type I with eccentric had the lowest diagnosis yield.

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