

ROLE OF RAPID ON-SITE EVALUATION OF BRONCHIAL BIOPSY WITH RADIAL PROBE EBUS FOR DIAGNOSIS PERIPHERAL PULMONARY LESIONS

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Area and Category(at submission):

[WCBIP] ROSE

Presentation Preference: Poster

Case Report: NO

Objectives

To evaluate the impact of ROSE(rapid on-site evaluation) and the factors that predict the diagnostic yield of radial probe endobronchial ultrasonography (EBUS) for peripheral pulmonary lesions (PPLs).

Design

Retrospective analysis.

Methods

We analyzed the diagnostic yields of TBB or brushing using EBUS for patients with PPLs in a tertiary university hospital from December 2007 to December 2010.

Results

A total of 640 patients with PPLs were included. A definite diagnosis was made by EBUS-guided TBB or brushing for 541 patients (85%). A total of 249 patients (38.9%) were examined by a rapid on-site cytology evaluation (ROSE) technique. PPLs in right apical and left apical-posterior segment locations, small PPLs < 3 cm without bronchus signs on CT scan, PPLs with pleural effusions, and the position of probe is not within are significant factors for predicting lower PPLs diagnostic yields by using EBUS guided TBB or brushing. The PPLs diagnostic yields with ROSE were significantly higher than without ROSE, no matter the PPLs are in the left apical-posterior and right apical segments or at the other location, the position of the probe is within or not within, and if the lesion is surrounded with pleural effusion or not.

Conclusions

ROSE can improve the PPLs diagnostic yield when using EBUS guided TBB or brushing

Diagnostic yield by TBB or brushing using EBUS with and without ROSE, base on the lesion of size and location on CT scan

	Overall	Diagnostic yield with/without ROSE		
	diagnostic yield	With ROSE	Without ROSE	P value
Lesion size				
Bronchus sign +& >3 cm	289/308 (93.8)	122/130 (93.8)	167/178 (93.8)	NS
Bronchus sign + & <3 cm	50/61 (82.0)	18/20 (90)	32/41 (78.0)	NS
Bronchus sign - & >3 cm	120/142 (84.5)	46/53 (86.8)	74/89 (83.1)	NS
Bronchus sign - & <3 cm	82/129 (63.6)	38/46 (82.6)	44/83 (53.0)	0.001
Lesion location				
Right apical and left apical posterior segment	38/65 (58.5)	21/29(72.4)	17/36(47.2)	0.047
Other location	503/575 (87.5)	203/220(92.3)	300/355(84.5)	0.006
Position of the probe				
Within	479/523 (91.6)	198/209(94.7)	281/314(89.5)	0.023
not within	62/117(53.0)	26/40(65.0)	36/77(46.8)	0.046
Pleural effusion contact				
With pleural effusion surrounded lesion	28/54 (51.9)	15/21(71.4)	13/33(39.4)	0.028
Without	513/586(87.5)	209/228(91.7)	304/358 (84.9)	0.020