00657 ADVANCED DIAGNOSTIC BRONCHOSCOPIC TECHNIQUES AMONG LUNG TRANSPLANT RECIPIENTS WITH PULMONARY NODULES

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Area and Category(at submission):

[WCBIP] Navigation systems

Presentation Preference: Oral

Case Report: NO

Background: To assess usefulness of Endobronchial Ultrasound (EBUS) and Electromagnetic Navigation (EMN) among lung transplant patients with pulmonary nodules.

Methods: We identified lung transplant recipients who presented with a new lung nodule from January 2009 to October 2013. We included patients in which EMN and/or EBUS were used in order to establish the etiology of each lung nodule. We describe the diagnostic yield of these advanced diagnostic modalities, pathology and compare results with autopsy information, when available.

Results: Twenty-three patients (Age: 52±15 years, Females: 12) presented with new lung nodules after Lung transplantation. These nodules were evident after a mean (±SD) of 17 (± 7) months. Twelve lung transplants were bilateral. Eighteen nodules were visualized on chest tomogram; seventeen of these were identified in transplanted lung, whereas two in the native lungs. Eight patients had mediastinal lymphadenopathy at the time of diagnosis. In our opinion, conventional bronchoscopic or percutaneous diagnostic procedures were of high-risk benefit ratio in these patients. Bronchoscopy with linear EBUS was used in eight patients, radial EBUS in eighteen patients and EMN in 7 with peripheral lesions. Combined, these modalities accurately detected etiologies in 4/24 (83%) patients (7 focal pneumonias, and 7 neoplasms). These techniques were not able to define an etiology for nodules due to post-transplant lymphoproliferative disorder (PTLD) on 3 patients; the diagnosis was established at the time of autopsy.

Conclusions: Advanced bronchoscopic techniques appear to aid in the diagnosis of lung nodules, although the true value of such approach remains uncertain. We failed to diagnose condition of PTLD using advanced bronchoscopic techniques. Further work in this patient population is encouraged in order to elucidate improved diagnostic approaches.

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sr121HCase	Modality	Location	Indication	Path	Outcome
1	**EMN/REBUS**	**RLL**	RLL Nodule	Lypmhs/histiocytes	Autopsy 11/25 PTLD
2	**REBUS**	**LLL**	LLL mass	No specimens taken	Autopsy 11/25 PTLD
3	**EMN/REBUS**	**RLL**	RLL Nodule	neg	improved on CT
4	**EMN/REBUS**	**LLL**	RLL nodule	neg	BAC by CT-FNA
5	**EBUS**	**4R**	Mediastinal Adenopathy	Small Cell	Small Cell
6	**EBUS**	**4R, 4L, 7, 10R**	RUL and Mediastinal	Atypcial	Confirmed neg by med
7	**EBUS**	**7, 2R**	Mediastinal Adenopathy	SCC both nodes	SCC
8	**EBUS/REBUS**	**4L, LUL**	Mediastinal Adenopathy LUL	Inflammation	Radiologic improvement
9	**REBUS**	**RML**	RML nodule	Inflammation	Radiologic improvement
10	**REBUS**	**RLL**	RLL Nodule	SCC	SCC
11	**EMN/REBUS**	**LLL**	LLL Nodule	Nondiagnostic	BAC by CT-FNA
12	**REBUS**	**RML**	RML nodule	Aspergillus	Radiologic Stability
13	**EMN/REBUS**	**RUL**	RUL Nodule	Pseudomonas	Radiologic improvement
14	**EMN/REBUS**	**RUL**	RUL Nodule	Acute Inflammation	Radiologic stability/died of PTLD
15	**REBUS**	**Lingula**	Lingula Nodules	Pseudomonas	Died
16	**EBUS/REBUS**	**RUL / 11R**	RUL Nodule and Mediastinal Adenopathy	SCC	SBRT
17	**REBUS**	**LLL**	LLL Nodules	Pseudomonas	Radiologic improvement
18	**REBUS**	**RLL**	RLL Nodule	Small Cell Carcinoma	SBRT
19	**EBUS**	**4L, 7 and 4 R stations**	Mediastinal Adenopathy	Lymphoid tissue, A2 rejection	(+) galactomanannan
20	**EMN/REBUS**	**RLL**	RLL Nodule	PTLD	Chemotherapy
21	**REBUS**	**RML**	RML Nodule	Nocardia	Died graft failure
22	**REBUS**	**RLL**	RLL infiltrate	MAI	Died BOS
23	**EBUS**	**4R**	Mediastinal Adenopathy	Small Cell Carcinoma	Died
24	**EBUS**	**4R and 7 stations**	Mediastinal Adenopathy	Lymphoid tissue	Died (septic shock)
25	**EBUS**	**4R**	Mediastinal Adenopathy	PTLD/CLL	Chemotherapy