Radial probe endobronchial ultrasound for peripheral pulmonary lesions. Initial experience of a center during COVID-19 pandemic.

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Background

Radial probe endobronchial ultrasound (RP-EBUS) is an important tool in peripheral pulmonary lesions diagnostic algorithm. The diagnostic yield depends on the lesion size and sampling tools used. In this study, we present our experience during COVID-19 pandemic.

Methods

We retrospectively reviewed data from 27 procedures (25 patients) who underwent RP-EBUS for investigation of peripheral pulmonary lesions between May 2020 and April 2022. Demographic, clinical and outcome data were collected and analyzed. Fluoroscopy was not used. Statistics was performed with SPSS 25®.

Results

- Total number of procedures: **27**
- Patients included: **25**

Gender	Percent
Male	74%
Female	26%

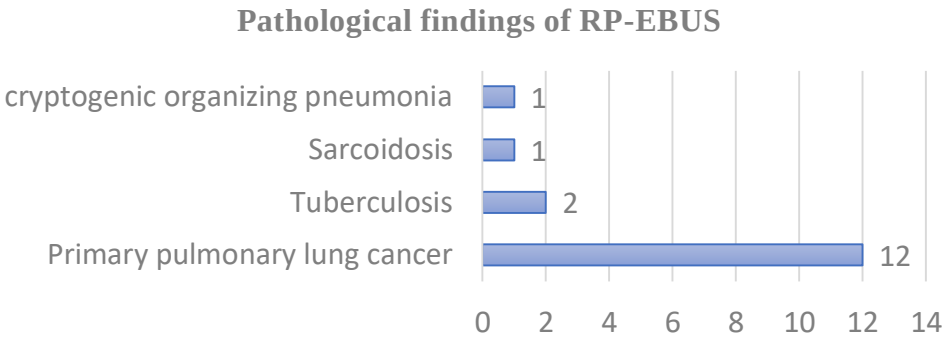
Age	
Min	46
Max	88
Median	66

Median lesion size was 2.4 (1.1-8.2) cm.

RP-EBUS	**Identified lesion** 77,8% (n=21/27)	**Concentric** 57.1%
		Eccentric 42,9%
	Unidentified lesion 22,2% (n=6/27)	

- RP-EBUS was used for diagnostic purposes, in 81.4% (n=22/27) **suspected primary lung cancer** and in 18.5% (n=5/27) **suspected metastatic lesions.**

Considering the combined results of bronchial washing, bronchial brushing, transbronchial biopsy and transbronchial needle aspiration **the overall diagnostic accuracy was 59,3% (16/27) of cases.**



- Primary pulmonary lung cancer – 12 (75%); Tuberculosis – 2 (12.5%); Sarcoidosis – 1 (6.25%); Cryptogenic organizing pneumonia – 1 (6.25%).

In 40.7% (n=11/27) of the cases it was not possible to obtain a diagnosis.

9% (n=1/11)	**Repeated RP-EBUS** → Final diagnosis of lung cancer
54,5% (n=6/11)	**Transthoracic biopsy** → Final diagnosis of lung cancer
18,2% (n=2/11)	**Lobectomy** → Final diagnosis of lung cancer
18,2% (n=2/11)	**Still under investigation and/or surveillance**

No major bleeding or pneumothorax was observed.

Conclusion

Although the suspected lesion was identified in the majority of cases, the diagnostic yield was low which could be related to the high frequency of eccentric lesions and to the learning curve . RP-EBUS without fluoroscopy seems to be a safe and useful procedure for the diagnosis of peripheral lung lesions.