

COMPARITIVE STUDY BETWEEN UNIORT VIDEO-ASSISTED THORACOSCOPY AND CERVICAL MEDIASTINOSCOPY IN MEDIASTINAL LYMPH NODE BIOPSY

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Introduction

The four most common causes of mediastinal lymphadenopathy are sarcoidosis, lymphoma, and metastatic carcinoma, and granulomatous infections. Lymph node locations have been traditionally divided into 14 stations according to surgical landmarks from mediastinoscopy and thoracotomy.

Nodal Zone	Lymph node station
Upper zone	Low cervical, supraclavicular, sternal notch (1R – 1L)
	Upper paratracheal (2R – 2L)
	Prevascular (3A) and retrotracheal (3P)
	Lower paratracheal (4R – 4L)
Aortopulmonary zone	Subaortic (aortopulmonary window - 5)
	Para-aortic (ascending aorta or phrenic nerve - 6)
Subcarinal zone	Subcarinal (7)
Lower zone	Paraesophageal (8)
	Pulmonary ligament (9)
Hilar zone	Hilar (10)
	Interlobar superior (11 S) and inferior (11 I)
Peripheral zone	Lobar (12)
	Segmental (13)
	Subsegmental (14)

Selection of the biopsy procedure depends on the lymph node station and full patient history of prior neck and thoracic surgery. The procedure options include cervical mediastinoscopy, thoracoscopy, anterior mediastinotomy, endobronchial ultrasound, navigational bronchoscopy, and esophageal ultrasound.

Aim of the work

The aim of this study was to compare between the efficacy, accessibility and safety of uniport VATS and cervical mediastinoscopy in mediastinal lymph node biopsy for both station 2R and 4R.

Patients and Methods

The present study was carried out on 24 patients who were presented with mediastinal lymphadenopathy admitted at Cardiothoracic Surgery Department University of Alexandria.

Patients were randomly divided into two groups 12 patients each. Group I included 12 patients in whom Mediastinoscopic lymph node biopsy was performed. Group II included 12 patients in whom VATS lymph node biopsy was performed.

Results

Table: Comparison between the two studied groups according to duration of operation and number of stations biopsied

	Uniport VATS (n = 12)		Video-assisted mediastinoscopy (n = 12)		Test of Sig.	p
	No.	%	No.	%		
Duration of operation (min.)					t= 3.032*	0.008*
Min. – Max.	50.0 – 90.0		30.0 – 100.0			
Mean ± SD.	73.33 ± 12.67		48.25 ± 25.71			
Median (IQR)	75.0 (62.50–82.50)		36.0 (32.50–60.0)			
Number of stations biopsied						
1	1	8.3	12	100.0	χ ² = 20.119*	^{MC} p <0.001*
2	6	50.0	0	0.0		
1+lung biopsy	2	16.7	0	0.0		
2+lung biopsy	2	16.7	0	0.0		
2+pleural biopsy	1	8.3	0	0.0		

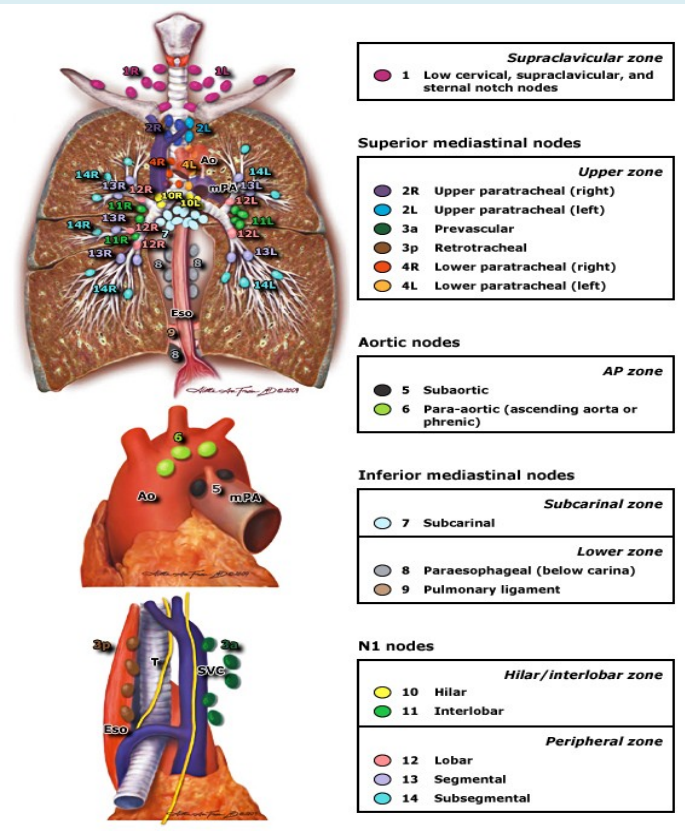


Figure: Stations of mediastinal L.N

Conclusion

Comparison between the two studied groups according to duration of operation was less in mediastinoscopy (p=0.008), post-operative hospital stay showed that mediastinoscopy had less hospital stay than thoracoscopy (p<0.001).

By Comparing the two groups according to accessibility of other biopsies showed that lung, pleural and other ipsilateral L.N biopsies can be obtained via thoracoscopy (p<0.001).