

: 1

. . . .

: (MOTT) (CT)

: MOTT 30 (: = 11:19,
51.2) 24 (: = 12:12, 42.5)
CT 2 가
: MOTT CT (MOTT
93.3%, 100%), (90%, 83.3%), (66.7%, 54.2%),
(63.3%, 75%), (53.3%, 54.2%), (50%, 37.5%)
(46.7%, 29.7%), (36.7%, 29.2%), (23.3%, 25%),
(23.3%, 29.2%), (16.7%, 29.2%) . CT MOTT
가 (30%,
53.3%; $P < .05$). 6 () CT
(33.3%), (53.3%, 25%) MOTT가 (40%, 16.7%), (63.3%,
가 (p<.05),
MOTT (MOTT 3.20, 2.04;
p=.011).
: MOTT CT
MOTT MOTT

가 24
(Mycobacterium Other Than . MOTT 11 , 19
Tuberculosis, MOTT) 51.2 12 , 12
가 (1). MOTT 42.5 . MOTT American Thora-
cic Society
가 .
(n = 20) 3
(n = 6) 2+
MOTT CT .
(n = 4) (2). 30 MOTT 16
Mycobacterium avium-intracellu-
lare(MAI, n=11), M. chelonii(n=3), M. fortuitum(n=2)
1996 8 1998 4 MOTT 30 3 (1
(CT) 1 , 1 , 1 .
, 1 , 1 .

CT

CT MOTT CT가 18 CT가

12 11, 13 CT GE

Hispeed Advantage (GE Medical system, Milwaukee, Wisconsin, U.S.A., n=10), Somatom plus-s scanner (Siemens medical systems, Erlangen, Germany, n=8), Somatom plus-4 scanner (Siemens medical systems, Erlangen, Germany, n=12)

54 CT

2 가

CT (3)

가

(>1 cm)

6

Chi-test

Student t test

MOTT 가 CT

가 (93.3%)

가 (83.3%).

(Table 1).

(96.3%) 가 (76.9%)

63.3% 46.7% 가

0.5-6.5 cm 2.4 cm

50% 2.5 cm

3mm 가

가 (77.8%) 44.5%,

Table 1. CT Findings in MOTT and Tuberculosis

CT Finding	Prevalence of CT Findings	
	MOTT(n= 30)	Tuberculosis(n= 24)
Findings of bronchogenic spread	28(93.3)	24(100)
Centrilobular nodule	25(83.3)	22(91.7)
Tree-in-bud appearance	18(60)	20(83.3)
Poorly defined nodule	18(60)	18(75)
Bronchiectasis	27(90)	20(83.3)
Bronchial wall thickening	20(66.7)	13(54.2)
Granuloma	19(63.3)	18(75)
Parenchymal bands	16(53.3)	13(54.2)
Mediastinal lymphadenopathy	15(50)	9(37.5)
Emphysema	14(46.7)	7(29.2)
Atelectasis	11(36.7)	7(29.2)
Cavity	9(30.0)*	4(58.3)*
Major airway stenosis	7(23.3)	6(25)
Consolidation	7(23.3)	7(29.2)
Pleural disease	5(16.7)	7(29.2)
Septal line thickening	2(6.7)	3(12.5)

Note-Number in parentheses are percentages.

* The difference was significant at analysis with the (2 distribution ($p < .05$).

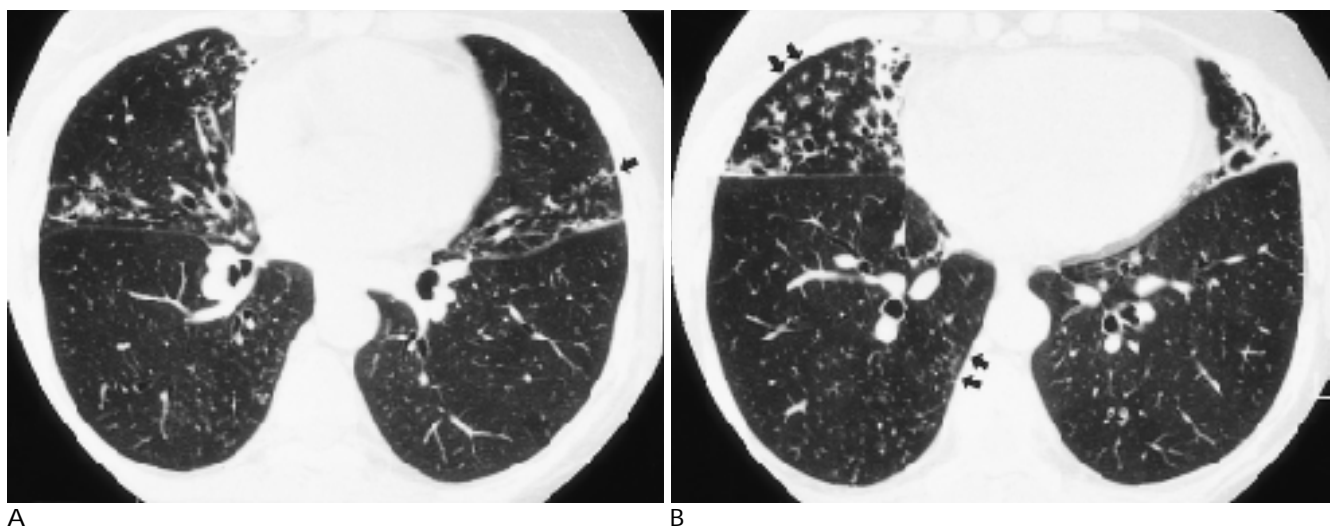


Fig. 1. MOTT in a 55-year-old woman. HRCT scans at the level of inferior pulmonary vein (A) and ventricle (B) show bronchiectasis in the right middle lobe and lingular division. Also note the centrilobular nodules(arrows) in the right middle lobe, right lower lobe and lingular division.

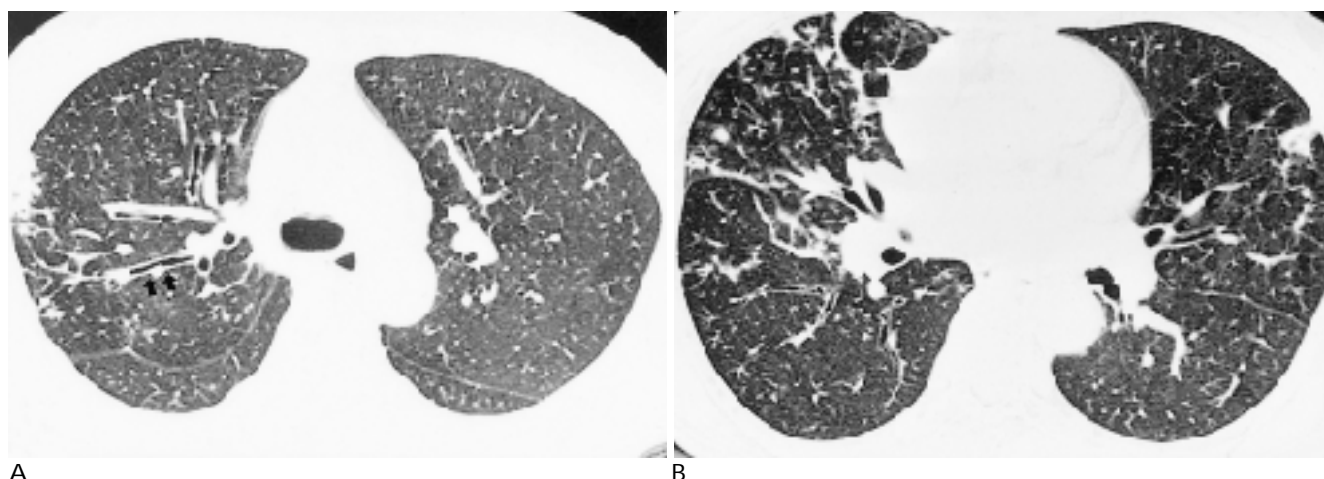


Fig. 2. MOTT in a 43-year-old woman. HRCT scans at the level of carina (A) and right middle lobe bronchus (B) show bronchiectasis with wall thickening (arrows) in the right upper lobe, right middle lobe and right lower lobe. Also note wide spread micronodules and tree-in-bud appearance involving right middle lobe. Sputum cultures were repeatedly positive for MAI.

Table 2. Frequency of CT Findings at Six Lobes in MOTT and Tuberculosis

CT Findings	RUL	RML	RLL	LUL	Lingula	LLL
	MOTT/Tuberculosis					
Findings of bronchogenic spread	73/58	46/33	53/58	37/50	40/42	40/33
Centrilobular nodule	73/88	43/33	50/58	36/50	36/41	40/33
Tree-in-bud appearance	33/42	13/17	20/38	17/38	7/25	10/21
Poorly defined nodule	37/33	13/5	23/33	20/30	23/21	17/13
Bronchiectasis	70/50	40/17*	63/33*	40/33	53/25*	47/29
Bronchial wall thickening	30/37	10/5	17/30	13/21	13/17	30/5
Granuloma	40/33	20/13	26/33	33/54	7/8	23/25
Parenchymal bands	30/38	10/13	17/17	13/30	13/5	30/17
Emphysema	23/21	3/8	17/13	27/13	7/8	7/13
Atelectasis	10/8	10/13	7/5	7/0	20/8	13/5
Cavity	16/25	0/0	13/2	13/17	0/0	7/0
Consolidation	10/8	3/4	7/13	0/0	3/4	10/8
Septal line thickening	3/5	0/8	3/0	0/0	0/8	0/0

Note - RUL = right upper lobe, RML = right middle lobe, RLL = right lower lobe

LUL = left upper lobe, LLL = left lower lobe

Numbers are percentages.

* The difference was significant at analysis with the (2 distribution ($p < .05$).

가 1.1% .
1-7 cm 2.5cm 가 (MOTT 3.97 ± 0.87 , 3.67 ± 0.66),
4 (2 , 2), 가 MOTT
3 (, , 1) 4 (MOTT 3.20 ± 0.60 , 2.04 ± 1.01 ; $p = .011$, Fig. 2).
가 23.3% ,
57.1% 1/3
5 2 , 4
CT MOTT MOTT
가 가 가
(Table 1). 6 가 1/3
CT 가 가 (4). ,
, MOTT가
(Table 2, Fig.1). , ,
(5).

MOTT
 , 가 가 , Hartman
 . 가 MOTT (7).
 , MOTT 가 가
 가
 1 MOTT (90%).
 (4, , Primack MOTT
 6), 1/2 CT
 (9). ,
 가 가
 가 , CT
 (7-10)
 (11). 가 가 (9, 18)
 Moore
 MOTT 40 . Moore
 , CT
 MOTT (8).
 가
 MOTT
 MOTT CT
 가 (12),
 MAI, M. fortuitum, M. cheloni (13)
 MAI가 가 (68.8%). MOTT
 MOTT
 , 가
 MOTT
 ,
 (14, MOTT MOTT 30% 58.3%
 15). MOTT
 , MOTT 20-30%가 (16-19)가 CT (7-9)
 (11, 16). , MOTT 30%
 가 ,
 . O brien MOTT 가 CT
 (4), Woodring 16 CT
 (17).
 MOTT CT 가
 가 CT 97%
 (7-9). 가
 1 cm 12% MOTT
 . MOTT (9)
 MOTT 가 6.7%

가
CT
가
CT
가
가
MOTT
가
가 CT
MOTT
16
1/2 MOTT
CT MAI (12, 20),
(7, 9).
가 1990
(13)
가 가
MOTT CT
MOTT

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CT Findings of Mycobacterial Infection Other Than Tuberculosis: Comparison with Tuberculosis¹

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Purpose : To compare the CT findings of mycobacterial infection other than tuberculosis (MOTT) with those of tuberculosis (TB).

Materials and Methods : The chest CT scans of 30 immunocompetent patients with culture-proven pulmonary MOTT (M:F= 11:19; mean age, 51.2 yrs.) and of 24 patients with active tuberculosis (M:F= 12:12; mean age, 42.5 yrs.) were analyzed by two radiologists; decisions were reached by consensus.

Results : Common findings for both MOTT and TB included bronchogenically-spread bronchogenic spread nodular lesion (93.3 % for MOTT, 100 % for TB), bronchiectasis (90 %, 83.3 %), bronchial wall thickening (66.7 %, 54.2 %), granuloma (63.3 %, 75 %), parenchymal scarring (53.3 %, 54.2), and mediastinal lymphadenopathy (50 %, 37.5 %). Less commonly observed findings were emphysema (46.7 %, 29.7 %), atelectasis (36.7 %, 29.2 %), narrowing of a major airway (23.3 %, 25 %), consolidation (23.3 %, 29.2 %), and pleural disease (16.7 %, 29.2 %). Except for cavity (30 %, 53.3 %; $p < .05$), the frequencies of each finding were not different between the two groups. A lobe-matched frequency comparison showed that only bronchiectasis in the right middle lobe (40 %, 16.7 %), right lower lobe (63.3 %, 33.3 %) and lingula division (53.3 %, 25 %) was significantly more common in MOTT than in TB ($p < .05$). The number of lobes in which bronchiectasis and bronchial wall thickening were involved was greater in MOTT(3.20) than in TB(2.04) ($p = .011$).

Conclusion : Although the CT findings of MOTT and TB overlap considerably, cavities are more common in TB, while in MOTT, bronchiectasis in the lower lung zone is more common and bronchiectasis tends to be more extensive.

Index words : Mycobacteria
Tuberculosis, pulmonary
Computed tomography (CT), high-resolution

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