

Original Article

RISK FACTORS FOR RECURRENCE AFTER SURGICAL TREATMENT OF NONTUBERCULOUS MYCOBACTERIAL LUNG DISEASE

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Abstract [Purpose] This study analyzed the rate and risk factors of recurrence of nontuberculous mycobacterial lung disease (NTM-LD) in patients treated with adjuvant surgical procedures.

[Subjects and Methods] We retrospectively analyzed the medical records of 92 patients treated with adjuvant surgery for NTM-LD at the National Hospital Organization Higashi Nagoya National Hospital and National Hospital Organization Nagoya Medical Center in Japan between August 2004 and June 2015. Recurrence was recorded, and factors associated with recurrence were analyzed.

[Results] The mean age of the 92 patients was 53.7 ± 12.0 years. The causative organisms were *Mycobacterium avium* in 59 patients (64.1%), *Mycobacterium intracellulare* in 23 (25.0%), *Mycobacterium abscessus* in 7 (7.6%), *Mycobacterium xenopi* in 2 (2.2%), and *Mycobacterium goodnae* in 1 (1.1%). Radiographic features included nodular bronchiectatic disease in 57 patients (62.0%), fibrocavitary disease in 22 (23.9%), bronchiectatic plus fibrocavitary disease in 10 (10.8%), solitary nodular disease in 2 (2.2%), and unclassifiable disease in 1 (1.1%). All patients had been previously treated with a macrolide-containing regimen. During a median follow-up period of 45.0 months after surgery, 21 patients (22.8%) experienced recurrence at a median of 29.0 months after surgery. Multivariate analysis showed that age (hazard ratio, 1.06; 95% confidence interval, 1.01 to 1.11) and *M. avium* (hazard ratio, 0.26; 95% confidence interval, 0.07 to

0.88) were independently associated with recurrence after surgery.

[Conclusion] Recurrence after adjuvant surgical treatment is not rare in patients with NTM-LD. Age and *M. avium* were factors influencing postoperative recurrence. The results of this study suggested that it may be necessary to pay more attention to relatively older patients and those with *M. avium* during follow-up periods after adjuvant surgical treatment for NTM-LD.

Key words: Nontuberculous mycobacterial lung disease (NTM-LD), Adjuvant surgical treatment, Surgery, Recurrence, Relapse, *Mycobacterium avium* complex (MAC)

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————— **Short Report** —————

CHANGES IN MAC ANTIBODY LEVELS BEFORE AND AFTER CHEMOTHERAPY

Niro OKIMOTO, Yasuhiro KAWAI, Tadashi KATOH, Takeyuki KURIHARA,
Naoyuki MIYASHITA, and Hiroki HARA

Abstract [Objective] We studied the changes of MAC antibody levels before and after antimycobacterial chemotherapy.

[Materials and Methods] We evaluated 32 patients treated by antimycobacterial chemotherapy 1 year or more. Sputum cultures and MAC antibody levels were compared before and after chemotherapy.

[Results] (1) In 17 cases with negative conversion of bacilli MAC antibody levels decreased from 5.43 U/ml to 2.72 U/ml. (2) In 15 cases with continued culture positive MAC antibody levels did not change from 5.31 U/ml to 5.42 U/ml.

[Conclusion] MAC antibody levels reflected the treatment

effects.

Key words: *Mycobacterium avium* complex, MAC antibody

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————— Case Report —————

A CASE OF INFECTION WITH *MYCOBACTERIUM MASSILIENSE*
IN A PATIENT WHO HAD LONG-TERM UNTREATED
MYCOBACTERIUM AVIUM COMPLEX PULMONARY DISEASE

Daisuke JINGU, Hiroshi TAKAHASHI, Takehiro YAJIMA, Makoto SHOJI,
and Satoshi UBUKATA

Abstract A 72 year-old female presented with a chief complaint of wet cough on October 2013. She had previously been diagnosed as *Mycobacterium avium* complex (MAC) disease in 2008, and had been under observation without treatment. The chest CT scan revealed worsening of her lung shadow. Both sputum culture and bronchoscopic culture yielded acid-fast bacillus and this was identified as *M. abscessus* complex by DDH method. We suspected that the worsening was due to microbial substitution, and started multi-antibiotic therapy. After a week, her symptom of wet cough had improved, and the sputum culture taken after two weeks converted to be negative. *M. abscessus* subsp. *massiliense* was identified by gene analysis. The patient underwent 2 years of antibiotic therapy. After the cessation, no bacteriological relapse hasn't occurred.

Although the development of gene technology has made the identification of *M. abscessus* subsp. *massiliense* possible,

the clinical features of pulmonary *M. massiliense* disease has not been clarified. As far as we know, a case of subacute infection with *M. massiliense* in a patient with long-term untreated MAC pulmonary disease is rare. In order to promote clarification, we need to do gene testing when we encounter *M. abscessus* complex patient and gather further clinical data.

Key words: *Mycobacterium abscessus*, *Mycobacterium massiliense*, Pulmonary nontuberculous mycobacteriosis, *Mycobacterium avium* complex, Gene analysis

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