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Nontuberculous mycobacteria

Nontuberculous mycobacteria in a third level hospital in Spain: clinical and epidemiological features

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INTRODUCTION

In the last few years, we have been attending to an increasing number of isolations of non-tuberculous mycobacteria (NTM) in the health area of Santiago de Compostela (458.759 inhabitants).

Our objective is to study the epidemiology of those infections caused by NTM, their associated factors and their clinical significance.

METHOD

Retrospective study of NTM isolations carried out from 2005 to 2013. Data sources: Microbiology Information System (OpenLab) and the electronic clinical history of Galicia (IANUS). Statistical analysis: SPSSv.20. Microbiological techniques: auramine staining, and the growth in liquid media (MGIT, Bactec 960, Becton Dickinson) 45 days and solid culture of Coletsos ® 8 weeks. Identification:phenotypic and genotypic methods: GenoType®Mycobacterium CM/AS (Hain Lifescience). For diagnosis, the criteria from the American Thoracic Society / Infectious Diseases Society of America (ATS/IDSA) 2007 were applied and the revision of the clinical history was used for the evaluation of clinical significance.

RESULTS

During those 9 years of study, a total of 456 strains were aisolated (*Mycobacterium avium complex* 34,65%, *Mycobacterium intracellulare* 20,83%, *Mycobacterium xenopi* 11,84%, *Mycobacterium abscessus* 9,21%, others 23,47%), concerning 212 patients.

91 patients fulfilled the NTM disease criteria of the ATS/IDSA (19,96%). The average age was 61 (range 1-89), 61,54% were male. The anatomical location was pulmonary in 70 (76,92%), dermal and joint samples in 13 (14,29%), lymph nodes in 4 (4,40%), urine in 3 (3,3%) and eyes in 1 (1,1%).

In 91 patients, it is isolated *M.avium complex* 38,46%; *M.intracellulare* 13,19%; *Mycobacterium chelonae* 12,10%; *M.xenopi* 10,99%; *Mycobacterium marinum* 6,59%; *M.abscessus* 4,40%; *Mycobacterium gordonae* 3,3%; *Mycobacterium lentiflavum*, and *Mycobacterium spp.* 2,20%; and *Mycobacterium fortuitum*, *Mycobacterium intermedium*, *Mycobacterium kansasii*, *Mycobacterium malmoense*, *Mycobacterium scrofulaceum* and *Mycobacterium szulgai* 1,1%.

Among those patients with pulmonary location, a base lung disease stands out as a predisposing factor in 69% (asthma, bronchiectasis, emphysema, chronic obstructive pulmonary disease, silicosis), previous history of tuberculous disease in 11,43%, shortage of α-1 antitrypsin and cystic fibrosis 1,43%. 24, 29 % of the patients started a treatment, of whom 17,65% received medical discharge as they were cured and 58,82% continue under monitoring.

Those patients with a diagnosis of extrapulmonary infection, 47,69 % received treatment and in 80% of the cases, the cure was confirmed microbiologically.

CONCLUSIONS

In our environment, the NTM cause respiratory pathology with a higher frequency, being *M.avium* the most frequent. There is great variability regarding the clinical management of the pulmonary presentation, with 75,71 % of untreated patients. That number decreases if we only pay attention to the last 2 years of the study, when 41 cases were dated, of whom 87,80 % were pulmonary and 50% of them received treatment. The increment of NTM isolations must force us to rethink about the treatment of these patients following international criteria.