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CLINICAL RELEVANCE OF DIFFERENTIATION BETWEEN MYCOBACTERIUM AVIUM AND MYCOBACTERIUM INTRACELLULARE IN M. AVIUM COMPLEX PULMONARY DISEASE

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Objective: Background: Mycobacterium avium complex (MAC) organisms are the most common non tuberculous mycobacterial (NTM) species that cause NTM pulmonary disease in humans. The clinical significance of differentiating M.avium from M.intracellulare in MAC pulmonary disease (MAC-PD) is unknown. Our goal was to asses the relevance of MAC members and record treatment outcomes and long term survival of MAC-PD patients in Croatia.
Methods: We conducted a retrospective study of all Croatian residents with MAC respiratory isolates from 2006 to 2016 with follow up to 2018. ATS/IDSA guidelines were used to establish MAC-PD and evaluate treatment adequacy.
Results: Medical records were available for 93/149 (62.4%) of isolates. Definite MAC-PD was diagnosed in 36/49 (73.4%) of M. avium and 24/44 (54.5%) of M. intracellulare isolates. Fibrocavitary form and smear positivity were more common with M. intracellulare than M. avium - 33.3 vs. 22.2% and 61 vs. 27.6%, respectively. Treatment was started in 23/36 (63.9%) of M. avium and 21/23 (91.3%) of M. intracellulare patients. Adequate treatment regimen was administered in 26.1% (6/23) of M. avium and 55% (11/20) of M.intracellulare patients, and microbiological cure was achieved in 83.3% and 72.7% of cases, respectively. One-year mortality of M. avium patients was 19.4% compared to 8.3% of M. intracellulare. 5-year all-cause mortality amounted to 36% and 30% of M.avium and M.intracellulare cases, respectively (p=0.876).
Conclusion: M.avium showed a higher percentage of isolates meeting the MAC-PD criteria. Still, M.intracellulare disease was more severe in its presentation, which partly explains the higher rate and adequacy of treatment. Although one-year mortality of M.avium cases was doubled compared to M. intracellulare, there were no differences in long term survival between the two groups.