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| **MDA5 antibodies and interstitial lung disease: clinical characteristics and outcomes** |
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| **Introduction/Aim:** Anti-melanoma differentiation-associated gene 5 (MDA5) is associated with rapidly progressive interstitial lung disease (RP-ILD). Our aim was to evaluate clinical characteristics and outcomes of different phenotypes of MDA5 with ILD.**Methods:** All patients at Fiona Stanley Hospital who tested positive for MDA5 antibodies from January 2017 to July 2023 were identified. Records were reviewed for demographics, clinical presentation, presence of ILD, pulmonary function tests, radiologic pattern and survival. Patients with ILD were categorised as having MDA5 associated ILD (dermatomyositis, myositis or RP-ILD) or alternative cause for ILD. MDA5 antibodies were assessed as weak, moderate or strong.**Results:** 33 patients with MDA5 antibodies were identified (see table). Of 8 cases of MDA5 associated ILD, 5 had RP-ILD and died in the index admission, 1 had a severe exacerbation, 1 has slowly progressive ILD and 1 has mild ILD. 5/8 (62.5%) patients with MDA5 associated ILD died, mean survival 0.85 months from date of testing and 3 months from symptom onset. 4/11 (36%) with MDA5 with alternative cause of ILD died, mean survival 32.8 months since date of testing and 103 months from symptom onset. 4/5 (80%) cases with RP-ILD had moderate or strong antibodies.

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| MDA5 without ILD (n=14) | MDA5 with alternative cause of ILD (n=11) | MDA5 associated ILD (n=8) |
| Scleroderma (7)CADM (1)Overlap connective tissue disease (1)Other (4) | IPF (5)Other CTD-ILD (4)Idiopathic NSIP (1)Sarcoidosis (1) | CADM (3; 2 with RP-ILD)RP-ILD in isolation (3)Myositis (2) |
| CADM=clinically amyopathic dermatomyositis, IPF=idiopathic pulmonary fibrosis, CTD-ILD=connective tissue disease-ILD, NSIP=Non-specific interstitial pneumonia. |

**Conclusion:** Although MDA5 associated ILD is associated with RP-ILD with devastating outcomes, we identified 42% of cases of MDA5 without ILD and a further 33% of cases of incidental MDA5 positivity that did not appear to influence ILD diagnosis or prognosis. Whilst MDA5 can be a poor prognostic marker, it is not universally the case.**Grant Support:** None. |